

State of New Jersey
Department of Environmental Protection

JON S. CORZINE Governor

LISA P. JACKSON Commissioner

Solid and Hazardous Waste Management Program
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MAR 1 6 2006

#### MEMORANDUM

To:

Distribution List

From:

Robert M. Confer, Bureau

Bureau of Solid and Hazard Waste Permitting - South

Subject:

Draft Hazardous Waste Facility Fermit for Safety-Kleen Systems, Inc., South

Plainfield Service Center, South Plainfield Borough, Middlesex County, EPA ID

No. NJD982270506, Permit No. HWP050001

We wish to extend to you the opportunity to comment on the draft hazardous waste facility permit and related documents for the subject facility. The attached information contains a copy of the public notice, fact sheet, and draft permit for your review.

Please circulate these materials to your appropriate staff for their review and comments. We will receive comments during the period as noted in the public notice. The public notice is being published in the Star Ledger and the Home News & Tribune.

If you should have any questions regarding this matter, please contact Nicholas Nader of my staff at (609) 984-2067.

Attachments: Draft Permit, Public Notice & Fact Sheet

#### Distribution List

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<u>Bureau of New Source Permitting</u>

Air Quality Regulation Program

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Document: CL Int Draft

C: Nicholas Nader, BSHWPS



# DRAFT

JON S. CORZINE
Governor

# State of New Jersey Department of Environmental Protection

LISA P. JACKSON
Commissioner

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#### Hazardous Waste Facility Permit

Under the provisions of N.J.S.A. 13:1E-1 et seq. known as the Solid Waste Management Act, this permit is hereby issued to:

Safety-Kleen Systems, Inc. South Plainfield Service Center 116 Skyline Drive South Plainfield, NJ 07080

For the Purpose of Operating a:

Lot No .:

Block No.:

In the Municipality of:

County:

Under Facility Permit No.:

EPA ID No.:

Hazardous Waste Storage & Transfer Facility

1.03 446

South Plainfield

Middlesex

HWP050001 NJD982270506

This permit is subject to compliance with all conditions specified herein and all regulations promulgated by the Department of Environmental Protection.

This permit shall not prejudice any claim the State may have to riparian land, nor does it allow the permittee to fill or alter or allow to be filled or altered in any way, lands that are deemed to be riparian, wetlands, stream encroachment areas or flood plains, or that are within the Coastal Area Facility Review Act (CAFRA) zone or are subject to the Pinelands Protection Act of 1979. In addition, the permit shall not allow the discharge of pollutants to waters of this State without prior acquisition of the necessary grants, permits, or approvals from the Department of Environmental Protection or the U.S. Environmental Protection Agency.

Issuance Date

Effective Date

Frank Coolick

Administrator

Solid and Hazardous Waste Program

Expiration Date



#### Scope of Permit

The conditions of this permit are based on the New Jersey hazardous waste regulations at N.J.A.C. 7:26G and on the permit application submitted by the permittee. N.J.A.C. 7:26G "incorporates by reference" (with limited exception) the Federal hazardous waste regulations found at Parts 124, 260-266, 268 and 270, Title 40 of the Code of Federal Regulations (C.F.R.). In order to eliminate confusion, and to clearly describe the precise obligations that are imposed upon the permittee, only the specific Federal regulatory citations are listed in the conditions of this permit. For the applicable State regulatory citations, refer to N.J.A.C. 7:26G.

This permit, along with the referenced permit application documents herein specified, shall constitute the sole Hazardous Waste Facility Permit for the operation of the hazardous waste facility. Any registration, Approval or Permit previously issued by the Division of Solid and Hazardous Waste or its predecessor agencies is hereby superseded. The permittee need not comply with the conditions of this permit to the extent and for the duration such non-compliance is authorized by an emergency permit (40 C.F.R. 270.61).

#### Description of Hazardous Waste Activities

Safety-Kleen Systems, Inc., South Plainfield Service Center, located in South Plainfield Borough, Middlesex County, New Jersey, is a commercial hazardous waste facility, that accepts for storage and transfer to authorized reclamation facilities, hazardous wastes generated by a variety of industrial and commercial sources (its clients). Hazardous wastes consisting of spent solvents (parts washer fluids) are stored in one (1) 15,000 gallon aboveground tank.. Hazardous wastes consisting of spent solvents, refrigeration waste, dry cleaning waste, paint waste and photographic waste are stored in one (1) container storage area (Warehouse) with a total capacity of 20,000 gallons. A drum return/fill area with a total capacity of 2,000 gallons is used to store and transfer containerized spent solvents to the aboveground tank.

#### Referenced Permit Application Documents

The permittee shall operate the facility, and construct or install associated appurtenances thereto, in accordance with the regulations contained in 40 C.F.R. Parts 260 through 270, the conditions of this permit, and the following permit application documents:

- (1) Permit Renewal Application dated February 10, 2005, with revisions dated May 23, 2005, signed by Marwan M. Fanek, Environmental, Health and Safety Manager, Safety-Kleen Systems, Inc.
- (2) Supplemental information dated October 26, 2005, signed by Marwan M. Fanek, and submitted in response to the Department's Notice of Technical Deficiency dated September 27, 2005.
- (3) The following drawings dated October 21, 2005, signed and sealed by Dennis Eryou, New Jersey registered professional engineer:

## SAFETY KLEEN SYSTEMS INC HWF Permit

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- Figure D-1 Service Center Site Plan. (i)
- Figure D-2 Office/Warehouse/R/F Floor Plan. (ii)

Figure D-3 - Return/Fill Piping Plan. (iii)

- Figure D-6 15,000 Gal. Horizontal Steel Aboveground Storage Tank. (iv) (v)
- Figure D-7 High Level Alarm Schematic and Control Panel Details. Figure D-7A - Receiver, Manual Verify and Sensing Element Details. (vi)
- Figure D-9 Drum Washer/Dumpster Isometric. (vii)
- Figure D-10 Piping and Instrumentation Details/Horizontal Tank. (viii)
- Figure D-12 Tank Gauge Installation Details for Tank. (ix)

In case of conflict, the applicable hazardous waste management regulations contained in 40 C.F.R. shall have precedence over the conditions of this permit, and the conditions of this permit shall have precedence over the Part B permit application documents.

#### Appendices

Permit Requirements - Safety-Kleen Systems, Inc., South Plainfield Service Center, Appendix I: EPA ID No. NJD982270506, Hazardous Waste Facility Permit No. HWP050001

## Appendix I

## Permit Requirements

## SAFETY-KLEEN SYSTEMS INC.

#### SOUTH PLAINFIELD SERVICE CENTER

NJD982270506

Hazardous Waste Facility Permit: HWP050001

#### LITY KLEEN SYSTEMS INC

NJD982270506 HWP050001 Hazardous Waste Facility Permit -Permit Renewal Requirements Report

#### Subject Item: PI 45809 -

- The permittee must comply with all conditions of this permit, except that the permittee need not 1. comply with the conditions of this permit to the extent and for the duration such noncompliance is authorized in an emergency permit (See 40 C.F.R. 270.61). Any permit noncompliance, except under the terms of an emergency permit, constitutes a violation of the appropriate Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for . denial of a permit renewal application. [40 CFR 270.30(a)]
- If the permittee wishes to continue an activity regulated by this permit after the expiration date of this 2. permit, the permittee must apply for and obtain a new permit. [40 CFR 270.30(b)]
- A complete application for a new permit shall be submitted at least one hundred eighty (180) days 3. prior to the expiration date of this permit. [40 CFR 270.10(h)]
- It shall not be a defense for a permittee in an enforcement action that it would have been necessary to 4. halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. [40 CFR 270.30(c)]
- In the event of noncompliance with the permit, the permittee shall take all reasonable steps to 5. minimize releases to the environment, and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment. [40 CFR 270.30(d)]
- 6. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit. [40 CFR 270.30(e)]
- This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request 7. by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition. [40 CFR 270.30(f)]
- The permit does not convey any property rights of any sort, or any exclusive privilege. [40 CFR 8. 270.30(g)1
- The permittee shall furnish to the Department, within a reasonable time, any relevant information 9. which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Department, upon request, copies of records required to be kept by this permit. [40 CFR 270.30(h)]
- The permittee shall allow an authorized representative of the Department, upon the presentation of 10. credentials and other documents as may be required by law, to: (a) enter at reasonable times upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit; (b) have access to and copy any records that must be kept under the conditions of this permit; (c) inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and (d) sample or monitor, for the purposes of assuring permit compliance or as otherwise authorized by RCRA, any substances or parameters at any location. [40 CFR 270.30(i)]

#### SAFETY KLEEN SYSTEMS INC

NJD982270506 HWP050001 Hazardous Waste Facility Permit -Permit Renewal Requirements Report

Subject Item: PI 45809 -



- 11. The permittee shall retain records of all sampling and monitoring information for a period of at least three (3) years from the date of the sample, measurement, report, or certification. Such records shall include all calibration and maintenance records for monitoring devices, all original strip chart recordings or other data for continuous monitoring instrumentation, and copies of all reports which include results of analyses or monitoring data. All reports required by this permit, the certification required by 40 C.F.R. 264.73(b)(9), and records of all data used to complete the application for this permit shall also be retained for a period of at least three (3) years. This period may be extended by the Department at any time. The permittee shall maintain records from all ground-water monitoring wells and associated ground-water surface elevations for the active life of the facility; and for disposal facilities throughout the post-closure care period as well. All samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. [40 CFR 270.30(j)(2)]
- Records for monitoring information shall include the date, exact place, and time of sampling or measurements; the identity of the individual(s) who performed the sampling or measurements; the date(s) analyses were performed; the identity of the individual(s) who performed the analyses; documentation of the analytical techniques or methods used; and the results of such analyses. [40 CFR 270.30(j)(3)]
- 13. All applications, reports, or information submitted to the Department shall be signed and certified as specified in 40 C.F.R. 270.11. [40 CFR 270.30(k)]
- 14. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. [40 CFR 270.30(1)(1)]
- 15. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. [40 CFR 270.30(1)(2)]
- 16. For a new facility, the permittee may not treat, store, or dispose of hazardous waste, and for a facility being modified the permittee may not treat, store, or dispose of hazardous waste in the modified portion of the facility, except as provided in 40 C.F.R. 270.42, until the permittee has submitted to the Department by certified mail or hand delivery a letter signed by the permittee and a registered professional engineer stating that the facility has been constructed or modified in compliance with the permit and the Department has inspected the modified or newly constructed facility and finds it is in compliance with the conditions of the permit. If, within fifteen (15) days of the date of submission of the aforementioned letter the permittee has not received notice from the Department of intent to inspect, prior inspection is waived and the permittee may commence treatment, storage, or disposal of hazardous waste. [40 CFR 270.30(1)(2)]
- 17. This permit is not transferable to any person except after notice to the Department. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Resource Conservation and Recovery Act (See 40 C.F.R. 270.40). [40 CFR 270.30(I)(3)]
- 18. Monitoring results shall be reported at the intervals specified elsewhere in this permit. [40 CFR 270.30(l)(4)]
- 19. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than fourteen (14) days following each schedule date. [40 CFR 270.30(l)(5)]

#### SAFETY KLEEN SYSTEMS INC

NJD982270506 HWP050001 Hazardous Waste Facility Permit -Permit Renewal Requirements Report

#### Subject Item: PI 45809 -

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- The permittee shall report any noncompliance which may endanger health or the environment orally 20. within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, including information concerning the release of any hazardous waste that may cause an endangerment to public drinking water supplies and any information of a release or discharge of hazardous waste or of a fire or explosion from the hazardous waste management facility, which could threaten the environment or human health outside the facility. [40 CFR 270.30(1)(6)(i)]
- The description of any reported occurrences of noncompliance or release and its cause shall include 21. the name, address, and telephone number of the owner or operator; the name, address, and telephone number of the facility; the date, time, and type of incident; the name and quantity of material(s) involved; the extent of injuries, if any; an assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and the estimated quantity and disposition of recovered material that resulted from the incident. [40 CFR 270.30(1)(6)(ii)]
- A written submission or report of the noncompliance or release shall also be provided within five (5) 22. days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The Department may waive the five (5) day written notice requirement in favor of a written report within fifteen (15) days. [40 CFR 270.30(l)(6)(iii)]
- All oral notifications of noncompliance or releases shall be provided to the NJDEP Hotline at 23. I-877-WARN DEP. Written notification shall be provided to the Bureau of Hazardous Waste and Transfer Facilities and the Bureau of Hazardous Waste Compliance and Enforcement at the addresses provided in this permit. [40 CFR 270.30(a)]
- A biennial report must be submitted covering facility activities during odd numbered calendar years 24. (See 40 C.F.R. 264.75). [40 CFR 270.30(1)(9)]
- The permittee shall report all instances of noncompliance not reported under 40 C.F.R. 270.30(1)(4), 25. (5), and (6) at the time monitoring reports are submitted. The reports shall contain the information listed in 40 C.F.R. 270.30(1)(6). [40 CFR 270.30(1)(10)]
- Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, 26. or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information. [40 CFR 270.30(I)(11)]
- The issuance of this permit does not authorize any injury to persons or property or invasion of other 27. private rights or any infringement of applicable Federal, State, or local laws or regulations. [40 CFR 270.4(c)]
- Cause for, and procedures of, modification, or revocation and reissuance of this permit shall be as 28. provided under 40 C.F.R. 270.41. [40 CFR 270.41]
- Causes for terminating a permit during its term or for denying a permit renewal application include 29. the permittee's noncompliance with any condition of this permit; the permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or misrepresentation of any relevant facts at any time; or a determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination. [40 CFR 270.43(a)]

#### SAFE, KLEEN SYSTEMS INC

NJD982270506 HWP050001 Hazardous Waste Facility Permit -Permit Renewal Requirements Report

#### Subject Item: PI 45809 -



- Facility personnel shall successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that insures the facility's compliance with the requirements of 40 C.F.R. 264.16, as stated in the facility's Part B permit application documents referenced in this permit. New employees shall be trained within six (6) months of the date of employment. [40 CFR 264.16(a)]
- The permittee shall maintain the following documents and records at the facility: (a) the job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job; (b) a written job description for each position; (c) a written description of the type and amount of both introductory and continuing training that has been and will be given to each person filling a position; and (d) records that document that the training or job experience required has been given to, and completed by, facility personnel. [40 CFR 264.16(d)]
- The permittee shall keep the training records on current personnel until closure of the facility; training records on former employees shall be kept for at least three (3) years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company. [40 CFR 264.16(e)]
- 33. The facility shall be designed, constructed, maintained and operated to minimize the possibility of fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to the air, soil, surface water or groundwater which could threaten human health or the environment. [40 CFR 264.31]
- 34. The facility shall be equipped with emergency equipment, including but not limited to: (a) an internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel; (b) a device, such as a telephone (immediately available at the scene of operations) or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or State or local emergency response teams; (c) portable fire extinguishers, fire control equipment, spill control equipment, and decontamination equipment; and (d) water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems. [40 CFR 264.32]
- All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, shall be tested and maintained as necessary to assure its proper operation in time of emergency. [40 CFR 264.33]
- Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless the Department has ruled that such a device is not required under 40 C.F.R. 264.32. [40 CFR 264.34(a)]
- 37. If there is ever just one employee on the premises while the facility is operating, he must have immediate access to a device, such as a telephone (immediately available at the scene of operation) or a hand-held two-way radio, capable of summoning external emergency assistance, unless the Department has ruled that such a device is not required under 40 C.F.R. 264.32. [40 CFR 264.34(b)]

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NJD982270506 HWP050001 Hazardous Waste Facility Permit -Permit Renewal Requirements Report

Subject Item: PI 45809 -

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- The permittee must attempt to make arrangements with State and local authorites, as appropriate for 38. the type and scale of facility, to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes. Where State or local authorities decline to enter into such arrangements, the permittee must document the refusal in the operating record and where more than one police and fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and specific fire department, and agreements with any others to provide support to the primary emergency authority must be made. [40 CFR 264.37(a)]
- The permittee must attempt to make agreements with emergency response teams, emergency 39. response contractors, and equipment suppliers to handle emergencies at the site. [40 CFR 264.37(a)(3)]
- The permittee must attempt to make arrangements to familiarize local hospitals with the properties of 40. hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases. [40 CFR 264.37(a)(4)]
- The provisions of the Contingency Plan included in the hazardous waste facility permit application 41. plus all amendments, revisions and modifications thereof subsequently submitted for review and accepted by the Department shall be carried out immediately whenever there is a fire, explosion or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment. [40 CFR 264.51(b)]
- Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his 42. designee when the emergency coordinator is on call) must immediately activate internal facility alarms or communication systems, where applicable, to notify all facility personnel and notify appropriate State or local agencies with designated response roles if their help is needed. [40 CFR 264.56(a)]
- If the emergency coordinator determines that the facility has had a release, fire, or explosion which 43. could threaten human health, or the environment outside the facility, and his assessment indicates that evacuation of local areas may be advisable, the emergency coordinator must immediately notify appropriate local authorities. The emergency coordinator shall be available to help officials decide if local areas should be evacuated. The telephone numbers are: Fire Department: (908) 756-4701 (or 911), and Police Department: (908) 755-0700 (or 911). [40 CFR 264.56(d)(1)]
- If the emergency coordinator determines that the facility has had a release, fire, or explosion which 44. could threaten human health, or the environment outside the facility, the emergency coordinator must immediately notify the New Jersey Department of Environmental Protection, Communication Center/Trenton Dispatch, Bureau of Communication and Support Services, at 1-877-WARN DEP (24 Hours) and the government official designated as the on-scene coordinator for the area (in the applicable regional contingency plan under Title 40 Part 1510) or the National Response Center (using their twenty-four (24) hour toll free number) at 800-424-8802. [40 CFR 264.56(d)(2)]
- When reporting an emergency to the required agencies, the emergency coordinator shall report: (a) 45. name and telephone number of the reporter; (b) name and address of the facility; (c) time and type of incident (e.g. release, fire); (d) name and quantity of material(s) involved, to the extent known; (e) the extent of injuries, if any; and (f) the possible hazards to human health, or the environment, outside the facility. [40 CFR 264.56(d)(2)]

#### SAFET ...LEEN SYSTEMS INC

NJD982270506 HWP050001 Hazardous Waste Facility Permit -Permit Renewal Requirements Report

Subject Item: PI 45809 -

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- The permittee shall note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within fifteen (15) days after the incident, the permittee shall submit a written report on the incident to the Department. The report shall include, but not be limited to: (a) name, address, and telephone number of the permittee; (b) name, address, and telephone number of the facility; (c) date, time, and type of incident (e.g. fire, explosion); (d) name and quantity of material(s) involved; (e) the extent of injuries, if any; (f) an assessment of actual or potential hazards to human health or the environment, where this is applicable; and (g) an estimated quantity and disposition of recovered material that resulted from the incident. [40 CFR 264.56(j)]
- 47. The permittee must comply with the security procedures described in the facility's Part B permit application plus all amendments, revisions and modifications thereof subsequently submitted and referenced in this permit.
- 48. The permittee shall prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of the facility. [40 CFR 264.14(a)]
- 49. A facility shall have a twenty-four (24) hour surveillance system which continuously monitors and controls entry onto the active portion of the facility; or an artificial or natural barrier which completely surrounds the active portion of the facility; and a means to control entry, at all times, through the gates or other entrances to the active portion of the facility. [40 CFR 264.14(b)]
- 50. The permittee shall post a sign with the legend, "Danger Unauthorized Personnel Keep Out", at each entrance to the active portion of a facility, and at other locations, in sufficient numbers to be seen from any approach to this active portion. The legend shall be written in English and in any other language prevalent in the area surrounding the facility and must be legible from a distance of at least twenty-five (25) feet. Existing signs with a legend other than "Danger Unauthorized Personnel Keep Out" may be used if the legend on the sign indicates that only authorized personnel are allowed to enter the active portion, and that entry onto the active portion can be dangerous. [40 CFR 264.14(c)]
- 51. The permittee shall keep a written operating record at the facility in which the information required under 40 C.F.R. 264.73(b) shall be recorded. The information shall be recorded as it becomes available and maintained in the operating record until closure of the facility. [40 CFR 264.73]
- 52. The permittee shall have a detailed written cost estimate of closing the facility in accordance with 40 C.F.R. 264.142(a). [40 CFR 264.142(a)]
- The permittee shall adjust the closure cost estimate for inflation within sixty (60) days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with 40 C.F.R. 264.143. If the permittee uses the financial test or corporate guarantee, the closure cost estimate shall be updated for inflation within thirty (30) days after the close of the firm's fiscal year and before submission of the updated information to the Department. The adjustment may be made by recalculating the maximum costs of closure in current dollars, or by using an inflation factor derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its Survey of Current Business. The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year. The first adjustment is made by multiplying the closure cost estimate by the inflation factor. The result is the adjusted closure cost estimate. Subsequent adjustments are made by multiplying the latest adjusted closure cost estimate by the latest inflation factor. [40 CFR 264.142(b)]

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NJD982270506 HWP050001 Hazardous Waste Facility Permit -Permit Renewal Requirements Report

#### Subject Item: PI 45809 -

DRAFT

- During the active life of the facility, the permittee shall revise the closure cost estimate no later than thirty (30) days after the Department has approved the request to modify the closure plan, if the change in the closure plan increases the cost of closure. The revised closure cost estimate must be adjusted for inflation as specified in 40 C.F.R. 264.142(b). [40 CFR 264.142(c)]
- The permittee shall keep at the facility, during the operating life of the facility, the latest closure cost estimate prepared in accordance with 40 C.F.R. 264.142(a) and (c) and, when this estimate has been adjusted in accordance with 40 C.F.R. 264.142(b), the latest adjusted closure cost estimate. [40 CFR 264.142(d)]
- The permittee shall establish financial assurance for closure of the facility. The permittee shall use a financial assurance mechanism approved by the Department, from the options specified in paragraphs (a) through (f) of 40 C.F.R. 264.143. [40 CFR 264.143]
- 57. The wording of all financial documents (except for the insurance policy itself) that are submitted to comply with the requirements for financial assurance for closure must be as per 40 C.F.R. 264.151 with the changes specified at N.J.A.C. 7:26G-8.1(c)10. [40 CFR 264.143]
- The permittee shall maintain financial responsibility for bodily injury and property damage to third parties caused by sudden accidental occurrences arising from operations of the facility. The permittee shall have and maintain liability coverage for sudden occurrences in the amount of at least \$1 million per occurrence with an annual aggregate of at least \$2 million exclusive of legal defense costs. The permittee shall demonstrate financial responsibility for sudden accidental occurrences according to the mechanisms given in 40 C.F.R. 264.147 paragraphs (a)(1), (2), (3), (4), (5) or (6). [40 CFR 264.147(a)]
- 59. The wording of all financial documents (except for the insurance policy itself) that are submitted to comply with the liability coverage requirements must be as per 40 C.F.R. 264.151 with the changes specified at N.J.A.C. 7:26G-8.1(c)10. [40 CFR 264.147]
- The permittee shall comply with all regulations of the Department of Environmental Protection and other State Statutes applicable to the facility. Regulations are effective upon publication in the New Jersey Register or as otherwise indicated in the Notice of Adoption in the New Jersey Register. [40 CFR 270.32(b)(2)]
- 61. All documents required to be submitted to the Department by this permit shall be submitted to the following agencies: New Jersey Department of Environmental Protection, Solid and Hazardous Waste Management Program, Bureau of Solid and Hazardous Waste Permitting South, P.O. Box 414, Trenton, NJ 08625-0414; and New Jersey Department of Environmental Protection, Solid and Hazardous Waste Enforcement, Bureau of Hazardous Waste Compliance and Enforcement, Central Region, P.O. Box 407, Robbinsville, NJ 08625-0407. [40 CFR 270.32(b)(2)]
- The permittee shall operate the facility, and construct or install associated appurtenances thereto, in accordance with the regulations contained in 40 C.F.R. Parts 260 through 270, the conditions of this permit, and the permit application documents referenced in this permit. In case of conflict, the applicable hazardous waste management regulations contained in 40 C.F.R. shall have precedence over the conditions of this permit, and the conditions of this permit shall have precedence over the Part B permit application documents. [40 CFR 270.32(b)(2)]
- One complete set of the permit application documents referenced in this permit, this Hazardous Waste Facility Permit, and all records, reports and plans as may be required pursuant to this permit shall be kept on-site and shall be available for inspection by authorized representatives of the Department upon presentation of credentials. [40 CFR 264.74(a)]

#### SAFE KLEEN SYSTEMS INC

NJD982270506 HWP050001 Hazardous Waste Facility Permit -Permit Renewal Requirements Report

#### Subject Item: PI 45809 -

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- 64. The permittee shall adhere to the provisions of the Waste Analysis Plan cited in this permit, and any subsequent revisions approved by the Solid and Hazardous Waste Management Program. No changes shall be made to the Waste Analysis Plan without prior written approval from the Solid and Hazardous Waste Management Program. [40 CFR 264.13(b)]
- 65. Each hazardous waste accepted to be managed at this location shall be fully identified and classified in accordance with 40 C.F.R. 264.13. At a minimum, the permittee shall develop all of the information which must be known to manage the waste in accordance with the provisions of this permit, as well as to treat or dispose of the waste at an authorized facility. If any hazardous waste can not be fully identified and classified based on company's knowledge of the process through which the waste was generated and the acceptance criteria detailed in the Waste Analysis Plan of the permit application document, then the permittee, prior to accepting the waste, shall have proper samples of the waste analyzed in accordance with the following test parameters and methods (Safety-Kleen methods adopted from the USEPA SW-846 methods), utilizing the Quality Assurance/Quality Control methodology established by the Department: Halogenated Volatile Organics using SK 9209; Specific Gravity using SK 9903; Flash Point using SK 9401; and pH using SK 9906. [40 CFR 264.13(a)]
- Waste sampling and analysis shall be in accordance with the procedures outlined in the waste analysis plan cited in this permit and shall employ equipment and methods as described in the latest edition of USEPA Manual SW-846 or as otherwise approved by the USEPA or the Department. All analyses performed to comply with the conditions of this permit shall be conducted by a laboratory that is certified by the Department to conduct the analysis. [40 CFR 264.13(b)]
- 67. The permittee shall maintain in the written Operating Record required by this permit records and results of all waste analyses performed. Such records and results shall be entered into the written Operating Record as they become available and shall be maintained until closure of the facility. [40 CFR 264.73(b)(3)]
- All records and results of analyses conducted shall include an identification of the waste sampled, the name of the individual who collected the sample, the date, time, and location of sampling; the date analyses were performed; the name of the individual who performed the analysis; and the results for all test parameters analyzed. [40 CFR 264.73(b)(3)]
- 69. The permittee shall perform inspections in accordance with the referenced permit application documents and as specified in the inspection requirements detailed in this permit for hazardous waste management units and associated areas and equipment. [40 CFR 264.15(b)]
- 70. The permittee must record the inspections required by this permit in an inspection log or summary. Records of all the required inspections shall be maintained at the facility for a minimum of three (3) years. At a minimum, this log must include the date and time of each inspection, the name of the inspectors, a notation of the observations made, and the date and nature of any repairs or other remedial actions performed. [40 CFR 264.15(d)]
- 71. The permittee shall remedy any deterioration or malfunction of equipment or structures which the inspection reveals on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action shall be taken immediately. [40 CFR 264.15(c)]
- 72. At the time of final closure, the permittee shall close the hazardous waste units authorized by this permit in accordance with 40 C.F.R. 264 Subpart G, the closure plan referenced in this permit, and the conditions of this permit. [40 CFR 264.111(c)]

# NJD982270506 HWP050001 Hazardous Waste Facility Permit -Permit Renewal Requirements Report

#### Subject Item: PI 45809 -

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- 73. The permittee shall keep a copy of the closure plan and all revisions to the plan at the facility until closure is completed. [40 CFR 264.112(a)]
- 74. The permittee shall amend the closure plan any time changes in operating plans or facility design affect the closure plan or whenever there is a change in the expected year of closure of the facility. The permittee must comply with the requirement cited at 40 C.F.R. 264.112(c)(3) for amendment of closure plan. [40 CFR 264.112(c)]
- 75. The permittee shall notify the Department at least forty-five (45) days prior to the date the permittee expects to begin closure, except in cases where the facility's permit is terminated or if the facility is otherwise ordered by judicial decrees or compliance order to close. The date when the owner or operator "expects to begin closure" shall be within thirty (30) days after the date on which the owner or operator expects to receive the final volume of wastes. [40 CFR 264.112(d)]

# Subject Item: HWSG802897 - Container Storage Areas

- The permittee is authorized to store containers holding hazardous wastes authorized by this permit in the areas specified herein. Maximum container storage area capacity shall be limited as follows: Warehouse 20,000 gallons; Return/Fill Station: 2,000 gallons. All containers shall be DOT approved. [40 CFR 264]
- 77. The permittee shall design, construct, operate and maintain each container storage area in accordance with the application documents referenced in this permit. [40 CFR 264]
- 78. If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects, etc.) or if it begins to leak, the permittee must transfer the hazardous waste from this container to a container that is in good condition. [40 CFR 264.171]
- 79. The permittee must use a container made of, or lined with, materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored so that the ability of the container to contain the waste is not impaired. [40 CFR 264.172]
- A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste. [40 CFR 264.173(a)]
- A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak. [40 CFR 264.173(b)]
- 82. Each containment system must have a base underlying the containers which is free of cracks or gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed. [40 CFR 264.175(b)(1)]
- The permittee must remove spilled or leaked waste and accumulated precipitation from each containment system in as timely a manner as is necessary to prevent overflow of the collection system. [40 CFR 264.175(b)(5)]
- The permittee must not place incompatible wastes, or incompatible wastes and other materials, in the same container, unless the permittee complies with 40 C.F.R. 264.17(b). [40 CFR 264.177(a)]
- The permittee must not place hazardous waste in an unwashed container that previously held an incompatible waste or material. [40 CFR 264.177(b)]
- A storage container holding hazardous waste that is incompatible with any waste or other material stored nearby must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device. [40 CFR 264.177(c)(1)]

#### SAFE KLEEN SYSTEMS INC

NJD982270506 HWP050001 Hazardous Waste Facility Permit -Permit Renewal Requirements Report

Subject Item: HWSG802897 - Container Storage Areas

- 87. The permittee shall manage all hazardous waste placed in a container in accordance with the applicable requirements of Subparts AA, BB, and CC of 40 C.F.R. Part 264. [40 CFR 264.179]
- 88. The permittee shall inspect each container storage area in accordance with the referenced permit application documents and this permit. At least weekly, the permittee shall inspect the following items for deterioration or malfunction which may cause discharge of hazardous waste or a threat to human health or the environment: all containers sealed; any leaking containers or spills; any deteriorating containers; any swollen or bulged containers; any concave containers due to internal vacuum building up; any corroded containers; all containers are properly labeled, identified and stacked; all containers are compatible with the waste stored in them; indications of cracks or leaks in the concrete floor, concrete sump, concrete curbs, or concrete vehicle ramps; and adequate aisle space and access. [40 CFR 264.174]
- Within ninety (90) days after receiving the final volume of hazardous waste at a hazardous waste container storage area, the permittee must remove all hazardous and non-hazardous waste from the area and ship the wastes to an authorized off-site facility. [40 CFR 264.113(a)]
- 90. Within one hundred eighty (180) days after receiving the final volume of hazardous waste at a hazardous waste container storage area, the permittee must complete decontamination of the area. Decontamination procedures shall include high-pressure wash of the secodary containment areas with a water/detergent solution followed by a triple rinse. [40 CFR 264.178]
- Within one hundred eighty (180) days after receiving the final volume of hazardous waste at the container storage area, the permittee shall collect all residues generated from the decontamination of the container storage area and ship the material off-site to a facility authorized to manage such waste.

  [40 CFR 264.178]
- 92. Within one hundred eighty (180) days after receiving the final volume of hazardous waste at a hazardous waste container storage area, the permittee must complete decontamination verification procedures for the area. Decontamination verification shall consist of collecting a sample of the final wash water from the hazardous waste container storage area and a wash water blank and analyzing the sample for constituents representative of the waste stored in the area. Decontamination procedures shall be repeated until the concentrations of the final wash water test parameters are equal to the amount present in a washwater blank. [40 CFR 264.178]
- The permittee shall submit to the Department, either prior to or with the closure report, the results of the decontamination verification procedures. The Department will review the results and notify the facility if additional decontamination procedures are required. The permittee shall not remove any equipment or structures requiring decontamination from the site until the Department has made a determination that decontamination was adequate. [40 CFR 264.115]
- Within sixty (60) days of completion of closure of a hazardous waste container storage area, the permitte shall submit to the Department, by registered mail, a report of closure activities. The report shall include a certification that the container storage area has been closed in accordance with the specifications of the approved closure plan and this permit and supporting documentation. The certification must be signed by the facility and by an independent registered professional engineer licensed by the State of New Jersey. The Department will review the report and perform an inspection of the facility. Based on the review of the report and the results of the inspection, the Department will notify the facility of the acceptability of the closure certification and of any additional activities which may be required. [40 CFR 264.115]

# NJD982270506 HWP050001 Hazardous Waste Facility Permit -Permit Renewal Requirements Report

Subject Item: HWSG802897 - Container Storage Areas

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The permittee is authorized to store the following hazardous and non-hazardous waste types in containers in the warehouse, prior to transfer to an authorized off-site treatment, storage and disposal facility: D001 (Ignitable as defined in 40 CFR 261.21); D002 (Corrosive as defined in 40 CFR 261.22), D003 (Reactive as defined in 40 CFR 261.23); D004-D043 (Toxicity characteristic wastes by TCLP as defined in 40 CFR 261.24); All "F" Codes (Hazardous wastes from non-specific sources as defined in 40 CFR 261.31); All "K" Codes (Hazardous wastes from specific sources as defined in 40 CFR 261.32); All "P" Codes (Commercial chemical products or manufacturing chemical intermediates identified as acute hazardous waste as defined in 40 CFR 261.33); All "U" Codes (Commercial chemical products or manufacturing chemical intermediates identified as toxic waste as defined in 40 CFR 261.33); and ID 72. The permittee is authorized to store containerized hazardous waste types described in Permit Requirement #114 of this permit in the return/fill station to be transfered into the authorized hazardous waste storage tank. [40 CFR 264]

### Subject Item: HWSG802899 - Tank 1

- 96. The permittee is authorized to store hazardous waste authorized by this permit in the tank systems specified herein: Tank No. 1, constructed of carbon steel, with a maximum capacity of 15,000 gallons. [40 CFR 270.32(b)(1)]
- 97. The permittee shall design, construct, operate, and maintain each tank system in accordance with the application documents referenced in this permit. [40 CFR 270.32(b)(1)]
- Each secondary containment system must be designed, installed, and operated to prevent migration of waste or accumulated liquid out of the system to the soil, ground water, or surface water at any time during use of the tank system. [40 CFR 264.193(b)(1)]
- 99. Spilled or leaked waste and accumulated precipitation must be removed from the secondary containment system within 24 hours. [40 CFR 264.193(c)(4)]
- Each secondary containment system must be maintained free of cracks and gaps. [40 CFR 264.193(e)(1)(iii)]
- The permittee must not place hazardous wastes or treatment reagents in a tank system if they could cause the tank, its ancillary equipment, or the secondary containment system to rupture, leak, corrode, or otherwise fail. [40 CFR 264.194(a)]
- The permittee must comply with the requirements of 40 C.F.R. 264.196 if a leak or spill occurs in a tank system. [40 CFR 264.194(c)]
- The permittee must not place ignitable or reactive waste in a tank system unless the permittee complies with 40 C.F.R. 264.198. [40 CFR 264.198]
- The permittee must not place incompatible wastes, or incompatible wastes and other materials, in the same tank system, unless the permittee complies with 40 C.F.R. 264.17(b). [40 CFR 264.199(a)]
- The permittee must not place hazardous waste in a tank system that has not been decontaminated if the tank system previously held an incompatible waste or material, unless the permittee complies with 40 C.F.R. 264.17(b). [40 CFR 264.199(b)]
- 106. The permittee shall manage all hazardous waste placed in a tank system in accordance with the applicable requirements of Subparts AA, BB, and CC of 40 C.F.R. Part 264. [40 CFR 264.200]

#### SAFE KLEEN SYSTEMS INC

NJD982270506 HWP050001 Hazardous Waste Facility Permit -Permit Renewal Requirements Report

#### Subject Item: HWSG802899 - Tank 1



- The permittee shall inspect the following items at least once a day in accordance with the referenced permit application documents and as follows: tank shell for damage, deterioration, bulges; overfill prevention controls/spill prevention/tank ancillary equipment for leaks, damage, deterioration; containment system for erosion, wet spots, cracks, gaps, uneven settlement, spalling, spills, precipitation; tank label for visibility; and emergency equipment for unobstructed access. [40 CFR 264.195]
- Within ninety (90) days after receiving the final volume of hazardous waste at a hazardous waste tank system, the permittee must remove all hazardous waste from the tank and manifest the waste to an authorized hazardous waste facility. [40 CFR 264.113(a)]
- 109. Within one hundred eighty (180) days after receiving the final volume of hazardous waste at a hazardous waste tank system, the permittee must complete decontamination of the tank, its ancillary equipment, and its secondary containment system. Decontamination procedures shall include high pressure wash with a detergent and water solution followed by a triple rinse. [40 CFR 264.197(a)]
- Within one hundred eighty (180) days after receiving the final volume of hazardous waste at the tank system, the permittee shall collect all residues generated from the decontamination of the tank system components and ship the material off-site to a facility authorized to manage such waste. [40 CFR 264.197(a)]
- 111. Within one hundred eighty (180) days after receiving the final volume of hazardous waste at a hazardous waste tank system, the permittee must complete decontamination verification procedures for the tank, its ancillary equipment and its secondary containment system. Decontamination verification shall consist of collecting a sample of the final wash water sample from the tank and a wash water blank and analyzing the sample for constituents representative of the waste stored in the tank. Decontamination procedures shall be repeated until the concentrations of the final wash water test parameters are equal to the amount present in a wash water blank. [40 CFR 264.197(a)]
- The permittee shall submit to the Department, either prior to or with the closure report, the results of the decontamination verification procedures. The Department will review the results and notify the facility if additional decontamination procedures are required. The permittee shall not remove any equipment or structures requiring decontamination from the site until the Department has made a determination that decontamination was adequate. [40 CFR 264.115]
- Within sixty (60) days of completion of closure of a hazardous waste tank system, the permitte shall submit to the Department, by registered mail, a report of closure activities. The report shall include a certification that the tank system has been closed in accordance with the specifications of the approved closure plan and this permit and supporting documentation. The certification must be signed by the facility and by an independent registered professional engineer licensed by the State of New Jersey. The Department will review the report and perform an inspection of the facility. Based on the review of the report and the results of the inspection, the Department will notify the facility of the acceptability of the closure certification and of any additional activities which may be required.

  [40 CFR 264.115]
- The permittee is authorized to store the following hazardous waste types in tanks: D001 (Ignitable as defined in 40 CFR 261.21); D004-D011, D018-D019, D021-D030, and D032-D043 (Toxicity characteristic wastes by TCLP as defined in 40 CFR 261.24); and ID 72. [40 CFR 264]



# SAFETY-KLEEN PROPOSED SOUTH PLAINFIELD, NEW JERSEY FACILITY ENVIRONMENTAL HEALTH AND IMPACT STATEMENT

Prepared for:

Safety-Kleen Corporation 1000 North Randall Road Elgin, IL 60123

Prepared by:

Environmental Quality Management, Inc. 1310 Kemper Meadow Drive Suite 100 Cincinnati, Ohio 45240

August 1993

#### TABLE OF CONTENTS

Section .		Page
Figures		iii
Tables		iv
1	Executive Summary	1-1
2	Project Description 2.1 Identification of Facility Sponsor/Owner/Operator 2.2 Purpose and Need for the Facility 2.2.1 Objectives 2.2.2 Types of Hazardous Waste to be Handled 2.3 Proposed Site 2.3.1 Site Location and Description 2.3.2 History of Site Use 2.4 Proposed Hazardous Waste Management Systems 2.4.1 Container Storage Area No. 1 2.4.2 Container Storage Area No. 2 2.4.3 Tank Storage 2.5 Project Schedule	2-1 2-3 2-3 2-3 2-7 2-7 2-10 2-10 2-12 2-12
	2.6 Need for Post-Closure Care 2.7 Compatibility with State and Regional Hazardous Waste Management Planning 2.8 Approvals Necessary for Implementation of Proposed Facility	2-14 2-14 2-18
3	Environmental Setting 3.1 Geology and Soils 3.2 Hydrology 3.2.1 Site Drainage 3.2.2 Surface Water Bodies 3.2.3 Area Groundwater 3.3 Climate and Air Quality 3.3.1 Climate 3.3.2 Air Quality	3-1 3-4 3-4 3-4 3-5 3-8 3-8
	3.4 Ecology 3.4.1 Terrestrial, Aquatic and Rare and Endangered Species 3.5 Land Use 3.6 Socioeconomic 3.6.1 Population and Housing 3.6.2 Local Economic Activity 3.6.3 Transportation 3.6.4 Emergency Services 3.7 Local Government Jurisdictions	3-10 3-11 3-12 3-12 3-12 3-13 3-14 3-15

(continued)

# TABLE OF CONTENTS (continued)

Section					Page
	3.8	Histo	orical and Archeological Resources		3-15
	3.9 3.10	3.8.2 Aest	2 Archeological Resources thetics		3-15 3-16 3-16 3-16
4	Envir 4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8	Water Ecolor Air C 4.4.1 4.4.2 4.4.3 Noise Human Aesth Socio 4.8.1 4.8.2 4.8.3	er Quality ogy Quality Source Description Modeling Procedures Modeling Results e an Health		4-1 4-1 4-2 4-2 4-6 4-7 4-11 4-11 4-15 4-15 4-15 4-15
5	5.2	5.1.1 5.1.2 Fores 5.2.1 5.2.2	Adverse Environmental Impacts truction and Normal Operations Construction of the Facility Normal Operation of the Facility eeable Abnormal Occurrence Spill Response Fires or Explosion Natural Disasters/Civil Unrest		5-1 5-1 5-1 5-1 5-2 5-3 5-3
6	Unusu				6-1
7	Refere	nces			7-1
8	Additio	nal Pe	ertinent Published Information Relating to the Site		8-1
9			of Environmental and Health Impact Statement	•	9-1
ppendices			,		0 1
A B C D E F	Generic ISC2ST ISC2ST	on Sou Mete Scree Resu	Subsidiaries arce Characterization porological Data (for 24 Hour Screening) ening Results alts (1985-1989) EHIS Co-Authors		

#### **FIGURES**

Number		<u>Page</u>
2-1	General Location	2-8
2-2	Site Plan	2-9
2-3	Floor Plan for Container Storage Area No. 1	2-11
2-4	Floor Plan for Container Storage Area No. 2	2-13
2-5	Tank Farm Plan	2-15
2-6	Tank Farm Elevation	2-16
2-7	Master Construction Schedule	2-17
3-1	Geologic Map	3-2
3-2	Soils Map	3-3
3-3	Proposed Site Drainage Map	3-6

#### **TABLES**

Number		Page
2-1	Summary of Container and Tank Storage	2-12
2-2	Summary of Required Permits and Approvals for the South Plainfield Facility	2-18
4-1	Safety-Kleen South Plainfield Emission Rates	4-4
4-2	Volume Source Summary	4-5
4-3	Summary of 24 Hour Screening	4-9
4-4	Summary of Normalized Annual Concentrations	4-10
4-5	Summary of Predicted TVOS Impact Concentrations by Source	4-12
4-6	Facility Summary of NonCarcinogic Compounds	4-13
4-7	Carcinogen Risk Summary	4-14
6-1	Potential Accidents/Spills	6-2

# SECTION 1 EXECUTIVE SUMMARY

The proposed Safety-Kleen South Plainfield facility will be located on Skyline Drive in the Borough of South Plainfield, Middlesex County, New Jersey. The facility will be owned and operated by Safety-Kleen Corporation headquartered in Elgin, Illinois. The proposed facility consists of two warehouses with a combined storage capacity of 76.032 gallons for containerized frazardous waster and two 15.000 gallon aboveground hazardous waste storage tanks. Hazardous wastes managed by the facility will include listed and characteristic hazardous wastes such as waste solvents, waste oil and other fluids.

The proposed facility has received a draft Hazardous Waste Facility Part B Permit from the New Jersey Department of Environmental Protection and Energy. The proposed facility has also received zoning approval and siting approval from local authorities. Additional permits to be obtained include appropriate air permits or registrations for all potential air emission sources, a NPDES permit for storm water discharge (part of a Safety-Kleen group permit), and a construction permit. These permits will be obtained after the facility receives its Hazardous Waste Facility Permit.

The proposed facility is located in an area of predominantly light industry within the South Plainfield. Because the proposed facility will be constructed in an area that is already industrialized, there will be no significant impacts on the geology, hydrology, air quality, and ecology of the immediate area. Socioeconomic impacts resulting from the proposed facility will also be minor. The only potential adverse effects on human health from the proposed facility are via the air pathway. Modelling of the emissions from the proposed facility indicates that predicted ambient concentrations for affected organic compounds are well below all applicable regulatory levels.

Emergency services for the proposed facility are in place and the facility will also maintain a contingency and emergency response plan to prevent and respond to emergencies that could occur at the facility.

#### SECTION 2

#### PROPOSED FACILITY

#### 2.1 Identification of Facility Sponsor/Owner/Operator

The owner/operator of the South Plainfield facility is the Safety-Kleen Corporation.

Facility Address:

Safety-Kleen Corporation

Skyline Drive South Plainfield, New Jersey 07080

EPA I.D. No:

NJD 982270506

New Jersey Facility No.:

1222B1

Contact Person:

Marwan Fanek, Environmental Manager

516/832-7095

Corporate Office Address: Safety-Kleen Corporation 1000 North Randall Road

Elgin, Illinois 60123 (708) 697-8460

#### Board of Directors:

Donald W. Brinckman, Chairman, Chief Executive Officer and President, Safety-Kleen Corporation

Kenneth L. Block, Chairman Emeritus, A.T. Kearney, Inc.

Richard T. Farmer, Chairman and Chief Executive Officer, Cintas Corporation

Russell A. Gwillim, Chairman Emeritus, Safety-Kleen Corporation

Edgar D. Jannotta, Managing Partner, William Blair & Company

Karl G. Otzen, President, Gerhard & Company

Paul D. Schrage, Senior Executive Vice President, McDonald's Corporation

W. Gordon Wood, Retired Vice President, Safety-Kleen Corporation Corporate Officers:

#### Corporate Officers:

Donald W. Brinckman, Chairman of the Board, Chief Executive Officer

John G. Johnson, Jr., President and Chief Operating Officer

Robert J. Burian, Senior Vice President Human Resources

Michael H. Carney, Senior Vice President Marketing

Joseph Chalhoub, Senior Vice President, Oil Recovery Division

David D. Dattilo, Senior Vice President Sales and Service

William P. Kasko, Senior Vice President Operations and Information

Robert W. Willmschen, Jr., Senior Vice President Finance

Glenn R. Casbourne, Vice President Engineering

Burton E. Ericson, Vice President, Assistant to the Chairman/CEO

Scott E. Fore, Senior Vice President Environment, Health and Safety

Joseph F. Hamlet, Vice President International

Wallace K. Louder, Vice President Information Systems

Clark J. Rose, Vice President Technical Services

Laurence M. Rudnick, Treasurer

John Rycombel, Controller

Hyman K. Bielsky, Senior Vice President General Counsel

Marian E. Miller, Secretary-Assistant

F. Henry Habicht, Senior Vice President Strategic/ Environmental Planning

Stock Listing: Traded on New York Stock Exchange

Stock Symbol:

SK

Auditors:

Arthur Anderson & Company

33 W. Monroe Street Chicago, Illinois 60603

Safety-Kleen Subsidiaries: Subsidiaries of the Safety-Kleen Corporation are listed in Appendix A.

#### 2.2 Purpose and Need for the Facility

#### 2.2.1 Objectives

The most important objective of the South Plainfield facility is to accumulate and store wastes in an efficient and safe manner. Storage space at the South Plainfield facility will allow Safety-Kleen to service smaller businesses, many of whom are small quantity generators and have been the core of the Safety-Kleen business since the parts washer service began in 1968. The facility will be organized to efficiently manage the day-to-day collection of wastes from Safety-Kleen customers and the accumulation of waste from other Safety-Kleen service centers. Many small businesses seek environmentally responsible methods of waste management. The South Plainfield Service Center will help fulfill this need.

In summary, Safety-Kleen is committed to responsible waste management practices and will strive for efficient and safe operations in service of its large industrial clients and small quantity generator customers.

#### 2.2.2 Types of Hazardous Waste to be Handled

The South Plainfield ladility will collect waste from customers engaged in automobile repair and servicing dry cleaning and other businesses and will receive waste from other service centers.

This section describes the chemical and physical nature of the hazardous wastes to be managed at the Safety-Kleen South Plainfield facility. The wastes to be stored may be identified by one or more U.S. EPA hazardous waste codes and/or New Jersey Department of Environmental Protection waste codes. Wastes stored at the facility are ultimately transferred to a Safety-Kleen recycle center or another permitted facility for processing.

The nominal types of hazardous wastes that are typically accepted from off-site generators and stored at the South Plainfield facility and those that are occasionally generated at the facility or other Safety-Kleen service centers are listed below:

Wastes accepted from offsite generators nominally are:

- 1) Speneparis washer fluid
- 2) Immersion cleaner waste
- 3) Wastes resulting from the dry cleaner service

- 4) Paint wastes
- 5) Industrial fluid waste
- 6) Waste oil

Wastes occasionally generated by Safety-Kleen nominally are:

- 1) Bottom sediment in the tank
- 2) Dumpster sediment

#### Wastes Resulting From the Parts Washer Service

The original service offered by the company in 1968 was the parts cleaner service and it remains the primary business activity. This service involves the leasing of a small parts degreasing unit containing Safety-Kleen solvent. On a regularly scheduled basis, a Safety-Kleen sales representative will clean and inspect the parts washer machine and replace the container of used fluid with one of clean product.

At the end of each day, the fluid will be transferred from the containers to a storage tank at the service center and containers of product will be prepared for the next day's services. Periodically, a tanker truck will be dispatched from one of the recycle centers to deliver a load of clean solvent and collect the spent fluid at the service center.

Safety-Kleen has also established a parts cleaner service for users who own their machines. This service, known as the Customer Owned Machine Service, provides a fluid reclamation service to these customers regardless of machine model.

Spent Safety-Kleen parts washer fluid will be accumulated in a 15,000-gallon aboveground tank via the return and fill station. Containers of spent fluid will be poured into one of three dumpsters at the return and fill station which in turn will empty into the tank. This waste handling method will result in three types of waste:

Spent Parts Washer Fluid--The spent fluid will be removed from the tank on a scheduled basis. This waste may be ignitable (D001) and/or TCLP and could bear any of the following waste codes: D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043. If the spent fluid is not ignitable and does not exhibit TCLP characteristics, it may be managed as a non-hazardous waste.

Bottom sediment in the tank—Sediment and other heavy material will be removed periodically from the bottom of the tank. The sediment may be ignitable (D001) and/or TCLP and could bear any of the following waste codes: D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043.

<u>Dumpster sediment</u>--Sediment will also accumulate in the bottom of the dumpsters in the return and fill station. This sediment will be removed from the dumpsters, containerized, and the containers will be labeled to indicate their contents. The chemical composition of this waste is analogous to that of the bottom sediment from the spent parts washer storage tank and has the same waste codes.

#### Immersion Cleaner Fluid

A second type of parts washer, the immersion cleaner, is used for the removal of varnish and gum from carburetors and transmissions. The machine consists of an immersible basket with an agitator affixed to a container of fluid. The immersion cleaner will remain in the container in which it was originally used until it is received at a recycle center. Containers of spent immersion cleaner fluid will be stored in one of the permitted container storage areas at the facility. The immersion cleaner formula is F002/F004 and may be a TCLP waste (D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043). Immersion cleaner waste may also be a non-hazardous waste if it is not listed hazardous waste and does not exhibit hazardous characteristics.

#### Wastes Resulting From the Dry Cleaning Service

Dry cleaning wastes consist of wastes from the dry cleaning industry such as spent filter cartridges, powder residue from diatomaceous or other powder filter systems, still bottoms, spent fluids, aqueous wastes, etc. These wastes will be packaged in containers on the customer's premises. The containers will then be palletized and placed in one of the permitted container storage areas at the South Plainfield Service Center. Approximately 80 percent of the dry cleaning customers generate waste perchoroethylene (F002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043). About

17 percent generate mineral spirits waste (D001, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043). The remaining 3 percent of customers generate 1,1,2-trichloro-1,2,2-trifluoroethane, (F002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043). Dry cleaning wastes may also be non-hazardous if they are not a listed waste and do not exhibit hazardous characteristics.

#### Paint Wastes

Paint wastes consist of various lacquer thinners such as acetone, isopropyl alcohol, methyl ethyl ketone, methyl isobutyl ketone, toluene, xylenes, and acetate compounds (D001, F003, F005, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043). The waste will be collected in containers at the customer's place of business and stored in one of the permitted container storage areas at the facility. If the paint waste does not exhibit a hazardous characteristic and is not a listed waste, then it may be managed as a non-hazardous waste.

#### Industrial Fluid Waste

Various waste fluids are collected from industrial customers and stored in one of the permitted container storage areas at the South Plainfield facility. Waste fluids most often collected by Safety-Kleen include mineral spirits, which may be ignitable (D001); 1,1,1-trichloroethylene (F001, F002); tetrachloroethylene (F001, F002); methylene chloride (F001, F002); 1,1,2-trichloro- 1,2,2-trifluoroethane (F001, F002); lacquer thinners (D001, F003, F005); 1,1,1-trichloroethane (F001/F002) and aqueous wastes. All of the fluids listed above may be any or all of the following waste codes (F001, F002, F003, F005, D001, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043).

#### **Used Oil**

Used oil will be stored at the service center in a 15,000-gallon tank. Used oil will be received from industrial generators (nonautomotive) and automobile servicing businesses. Used oil received at the service center may include used crankcase oil, used lubrication oil, waste petroleum oil, metal working oils and oily waste water. According to 40 CFR 266.40, used oil containing more than 1,000 ppm total halogens is presumed to be hazardous according to federal regulations. Safety-Kleen may rebut this presumption by demonstrating that the oil does not contain hazardous waste (e.g., significant concentrations of halogenated hazardous constituents) as defined in Appendix VIII of Part 261. The waste oil is listed as a New Jersey hazardous waste identified by the waste codes X721, X724, and X726.

#### 2.3 Proposed Site

#### 2.3.1 Site Location and Description

The South Plainfield Service Center will be located in the Borough of South Plainfield, Middlesex County, New Jersey. The location of the facility is shown on Figure 2-1. The facility address is:

Safety-Kleen Corporation Skyline Drive South Plainfield, New Jersey 07080

Skyline Drive, a dead-end street, is accessed from Montrose Avenue. The site, located on lot 1.03 of Block 446, consists of 2.521 acres. The legal boundaries are displayed on Figure 2-2 which is the site plan for the facility. The site is south of the Lehigh Valley Railroad and north of Highway 287. The area is zoned industrial. Surrounding land uses consist of residential and industrial areas. Contiguous land uses include: railroad lines, a highway, manufacturing and warehousing businesses. There are no wells onsite or within 1000 feet of the facility. The facility is not located within a 100 year flood plain or in any coastal flood hazard area identified by the Federal Emergency Management Agency or delineated by the State of New Jersey Department of Environmental Protection. The site is relatively flat with contours from 80 feet to 90 feet above sea level. Additional details concerning the environmental setting are presented in Section 3.

Revision: 0 August 1993

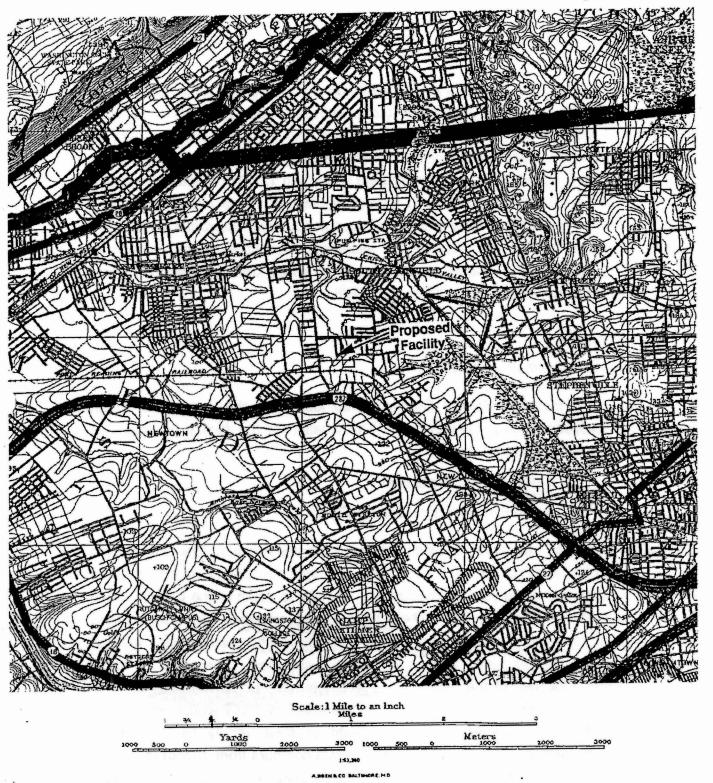
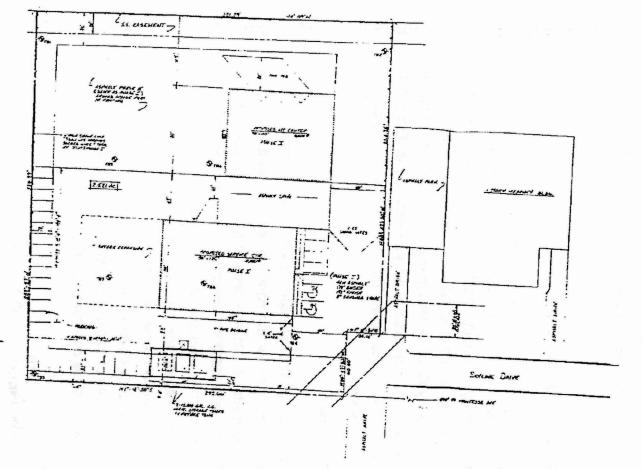


Figure 2-1. General Location



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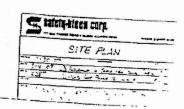
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SITE LOCATION

Figure 2-2. Site Plan

2-9



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Trucks will access the facility daily. Access roads are designed in accordance with engineering criteria appropriate for sustaining the traffic volume and loading for the activities in the area.

#### 2.3.2 History of Site Use

The property was previously owned by the Pulitzer family and sold to Safety-Kleen in 1987. A letter of intent dated July 23, 1987 to construct the South Plainfield hazardous waste storage facility, along with a Part B Application (last revision April 18, 1988) for the proposed facility was sent by Safety-Kleen via certified mail to NJDEP. In response to the letter and Part B Permit Application Safety-Kleen received a draft permit from NJDEP, dated March 21, 1989.

#### 2.4 Proposed Hazardous Waste Management Systems

This section provides a description of the planned hazardous waste management activities at the South Plainfield facility. The South Plainfield Service Center will collect and store waste until sufficient quantity is accumulated to transport the waste to a Safety-Kleen recycle center or another authorized facility. Hazardous wastes from Safety-Kleen customers and other Safety-Kleen service centers will be stored in the two permitted container storage areas or the permitted tanks as described in Table 2-1. Clean product will also be stored at the service center prior to shipment to customers. No treatment of waste will occur at the site.

#### 2.4.1 Gorilainer Storage Area No: 1----

The wastes to be stored in the container storage area No. 1 are summarized on Table 2-1. Figure 2-3 shows the floor plan for the container storage area. The total permitted storage capacity for the container storage area of the warehouse is 6,912 gallons. Wastes stored in containers will include immersion eleaners dry cleaning product may also be stored in the area. Inspections of the container storage area will ensure that the permitted hazardous waste storage capacity is not exceeded.

The secondary containment for the container storage area of the warehouse will consist of a concrete floor sloped to a grate-covered collection trench. The secondary containment system will be maintained free of cracks and gaps, and will be sufficiently impervious to contain leaks and spills until the collected material is detected and

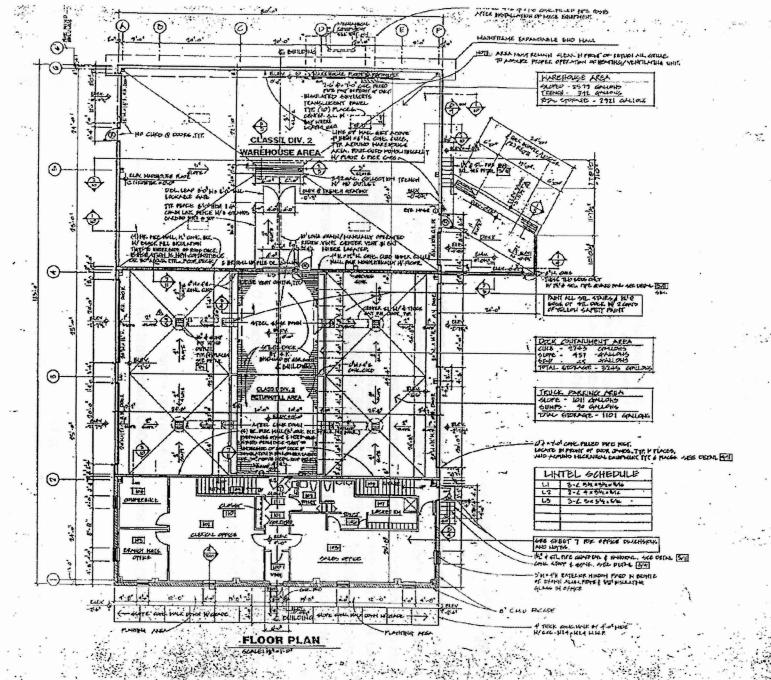


Figure 2-3. Floor Plan for Container Storage Area No. 1

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TABLE 2-1. SUMMARY OF CONTAINER AND TANK STORAGE

Storage Unit	Permitted Storage Capacity (Gallons)	Use
Container Storage Area No. 1	6,912	Dumpster sediment, spent Immersion cleaner, tank bottoms sediment, and dry cleaning waste
Tank	15,000	Waste oil
Tank	15,000	Spent parts washer fluid
Container Storage Area No. 2	69,120	Dumpster sediment, immersion cleaner, tank bottoms sediment, dry cleaning waste, paint waste and industrial fluid waste

removed. The system will have a capacity of at least 10 percent of the volume of containers stored in the area, or 691 gallons.

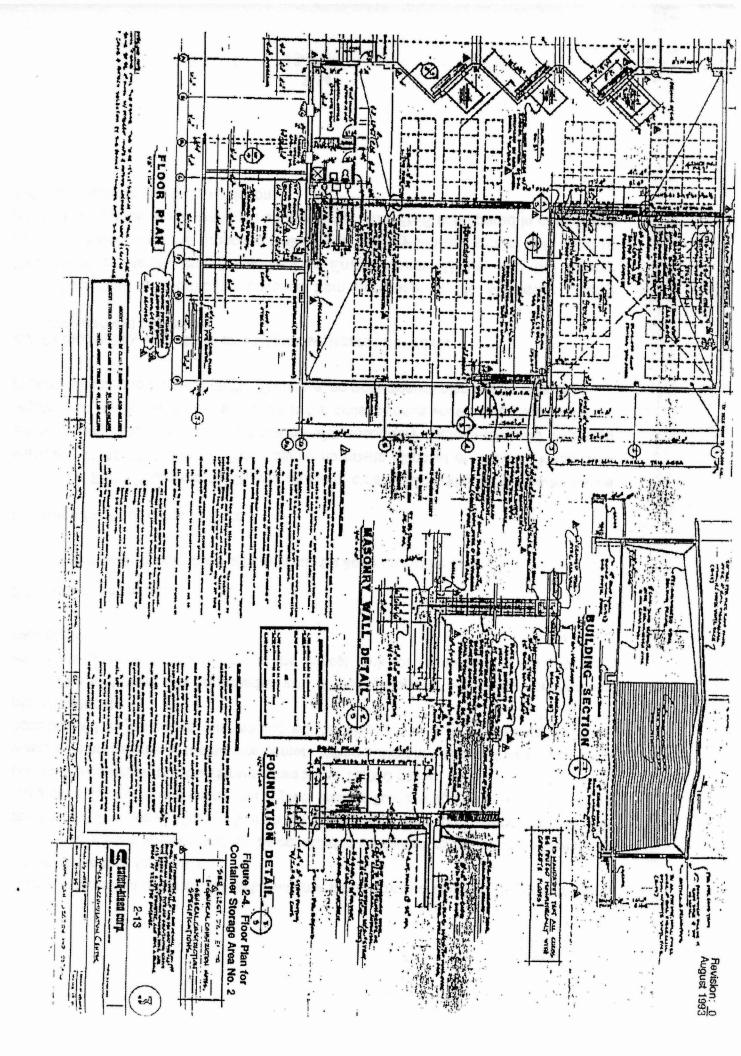
#### 2.4.2 Container Storage Area No. 2

The wastes to be stored in the container storage area No. 2 are summarized on Table 2-1. Figure 2-4 shows the floor plan for the container storage area. The total permitted storage capacity for the container storage area No. 2 is 69,120 gallons. Waste stored in containers will include immersion cleaner, dry cleaning waste, paint waste, industrial fluid waste, dumpster section and rank container storage area will ensure that the permitted storage capacity is not exceeded.

The secondary containment for the container storage area No. 2 will consist of a sloped floor with trenches and will have a capacity of at least 10 percent of the volume of containers stored in the area, or 6,912 gallons.

#### 2.4.3 Tank Storage

There will be one tank farm at the service center with one 15,000-gallon waste parts washer fluid storage tank and one 15,000-gallon waste oil storage tank. The tank



farm will consist of 3 horizontal tanks within a fabric covered building. Figures 2-5 and 2-6 show the tank farm plan.

Waste parts washer fluid will be collected in containers at the customer's place of business. The waste fluid will then be transferred from containers, via the wet dumpsters, to the 15,000 gallon waste parts washer fluid storage tank. Used oil will be collected by a tanker truck and transferred to the 15,000 gallon waste oil storage tank at the service center. When sufficient volume of waste has been accumulated in the tanks, the wastes will be shipped to a recycle center or other

The tank farm will be provided with 33,660 gallons of secondary containment, which will be equal to the volume of the largest tank (or 10 percent of the tank farm capacity whichever is greater).

#### 2.5 Project Schedule

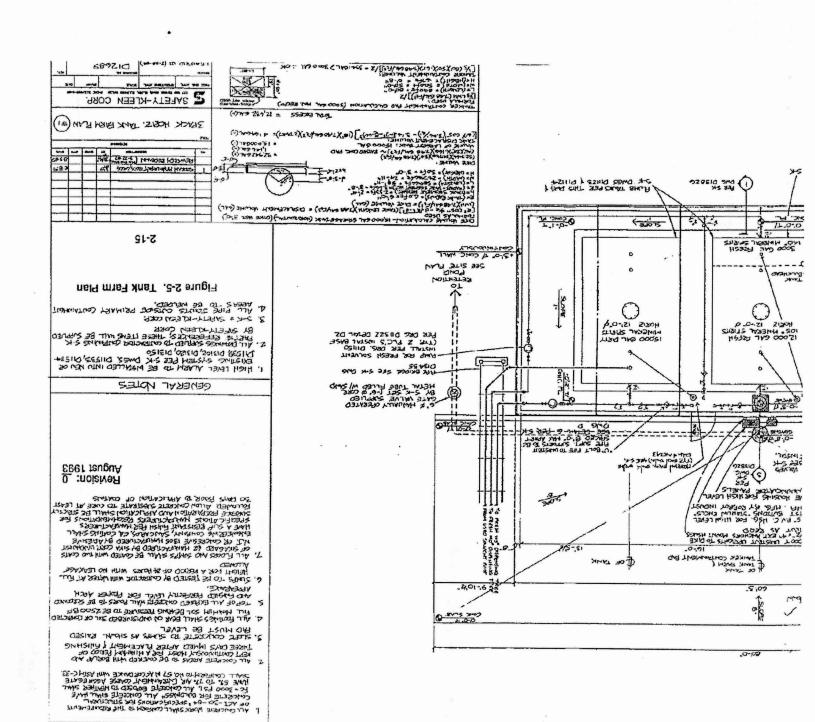
The master construction schedule can be seen on Figure 2-7.

#### 2.6 Need for Post-Closure Care

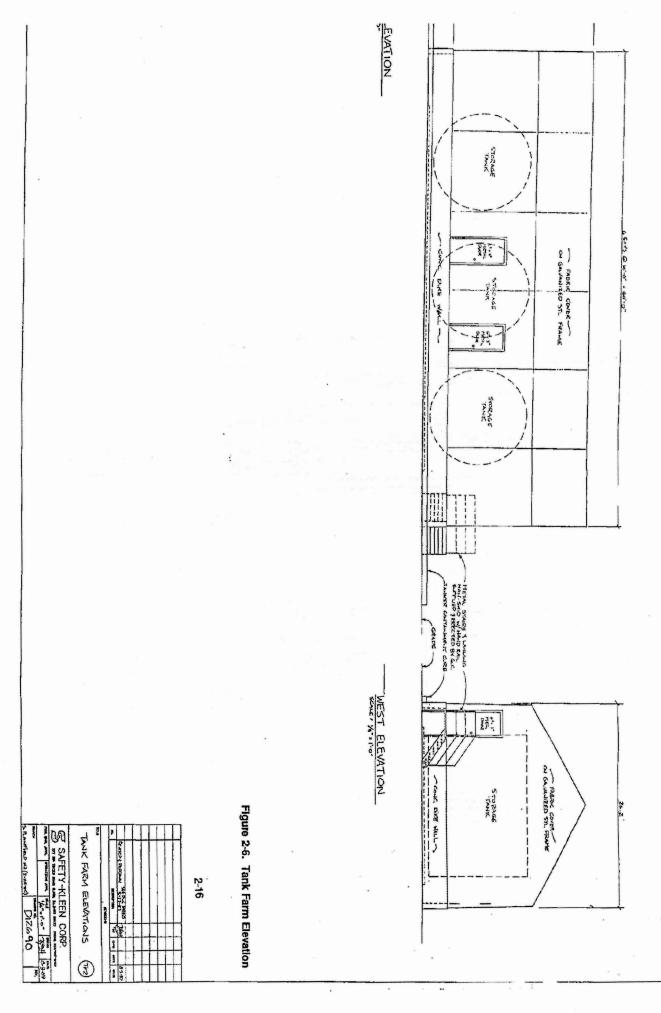
The South Plainfield facility will be clean closed according to the performance standards NJAC 7:26-9.8(b). There will be no onsite disposal of wastes. Hazardous waste management units will be provided with secondary containment and inspected regularly so that no wastes will migrate to the soils, surface water, or ground water, or present a hazard to human health. Therefore, no post-closure plan will be necessary.

#### 2.7 Compatibility with State and Regional Hazardous Waste Management Planning

According to information obtained from personnel in the Middlesex County Department of Health, the Department of Environmental Affairs, and the County Planning Department, the proposed Safety-Kleen facility-will-not conflict with local or regional hazardous waste management planning. This EHIS is prepared in compliance with state hazardous waste regulation.



CONCRETE HOTES



Revision: 0 August 1993

#### GENERAL CONSTRUCTION SCHEDULE

The construction schedule for the South Plainfield, New Jersey Service Center is as follows:

- 1. Three to four weeks -- Site Work. This phase consists of grade the site, and constructing drainage ditches and a retention pond if necessary.
- Three months -- Concrete Work. This phase consists of pouring the concrete for the office/warehouse structure, the tank dike and the secondary containment for the return and fill and drum storage areas.
- 3. Five months -- Building Erection. This phase consists of the building of the two site buildings and the installation of the aboveground tanks. The interior of the office/warehouse is begun and finished within this time period, including all plumbing and electrical work. All internal roads, loading/unloading areas and landscaping is completed in this phase of work.

The average time for construction of a Safety-Kleen facility is 11 months.

Figure 2-7. Master Construction Schedule

## 2.8 Approvals Necessary for Implementation of Proposed Facility

Table 2-2 summarizes the types of permits and status of required permits and permit applications necessary for construction and operation of the South Plainfield facility.

TABLE 2-2. SUMMARY OF REQUIRED PERMITS AND APPROVALS FOR THE SOUTH PLAINFIELD FACILITY

Type of Permit	Status of Permit
Hazardous Waste Facility Permit	Draft permit issued
Air Permits	Will be applied for after receipt of final Hazardous Waste Facility Permit
Stormwater Discharge Permit	Will be applied for after receipt of final Hazardous Waste Facility Permit
Zoning Approval	Have received approval from local authorities
Site Plan Approval	Have received approval from local authorities
Building Permit	Will be applied for after receipt of final Hazardous Waste Facility Permit

#### **SECTION 3**

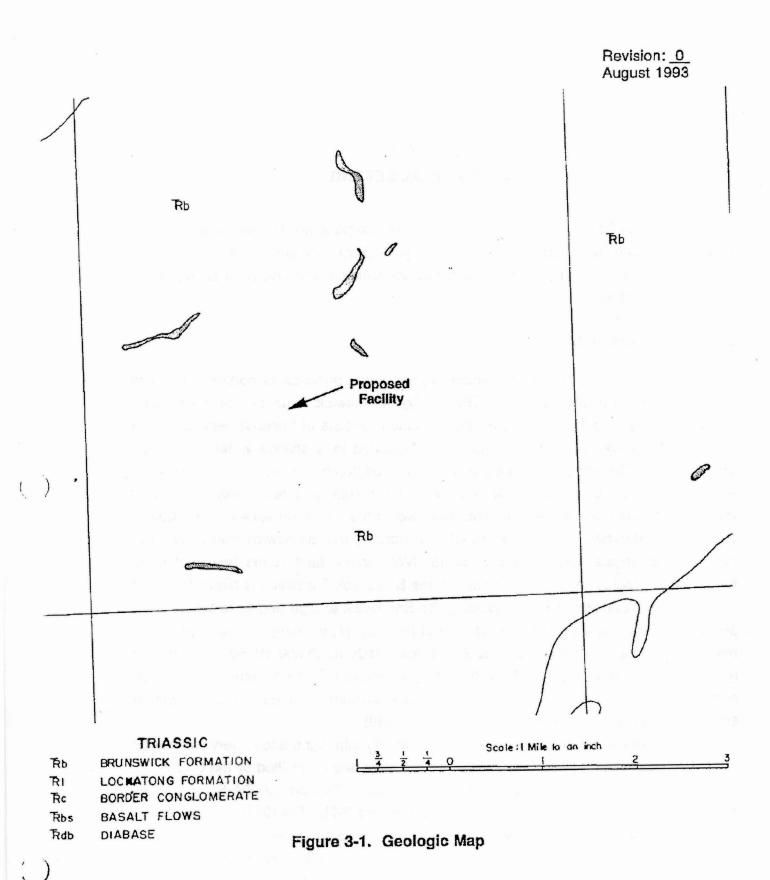
#### **ENVIRONMENTAL SETTING**

The site for the proposed Safety Kleen Corporation (Safety Kleen) South Plainfield Service Center (site) is located on Skyline Drive in South Plainfield, Middlesex County, New Jersey. This section describes the existing environmental conditions in the area of the facility.

#### 3.1 Geology and Soils

The site lies within the Piedmont physiographic province in north-central New Jersey. Bedrock at the site is the Triassic Age Brunswick Formation of the Newark Group (see Figure 3-1). The Brunswick Formation consists of fractured reddish-brown shales with locally interbedded sandstones deposited in a shallow-water continental environment. The red color has been reported to originate from iron bearing minerals which were oxidized to a hematitic clay as the sediments were repeatedly wetted and dried during sediment deposition. The thickness of the formation varies from 6,000 to 8,000 feet (Anderson, 1968). In Middlesex County, the Brunswick Formation dips northwest at angles varying from 5' to 15' NW. Major fault zones have not been recognized in Middlesex County; however, the Brunswick Formation is highly fractured with numerous cracks/fractures traversing the Brunswick at high angles to the bedding plane (Barksdale, et all, 1943). In the area of Rahway, New Jersey (approximately five miles east/northeast of the site), the Brunswick trends northeast (N 50° E) and dips gently to the northwest (9' - 12' NW). The predominant fracture system also trends northeast (N 45° E) and is vertical. A less predominant secondary fracture system strikes N 75° W and is nearly vertical (Anderson, 1968).

The Brunswick Formation weathers to a usually thin, tight, and impervious clayey soil (Barksdale, et all, 1943). The soils at the site have been classified by the United States Department of Agriculture - Soil Conservation Service (USDA-SCS) as the Klinesville shally loam, 0 - 5 percent slopes (see Figure 3-2). The Klinesville occurs on land which is gently sloping and well drained including ridges, divides, and side slopes. Typically, this soil type consists of a surface layer approximately 8 inches thick of a dark brown shally loam. The subsoil consists of mostly dark reddish brown shally silt loam



3-2

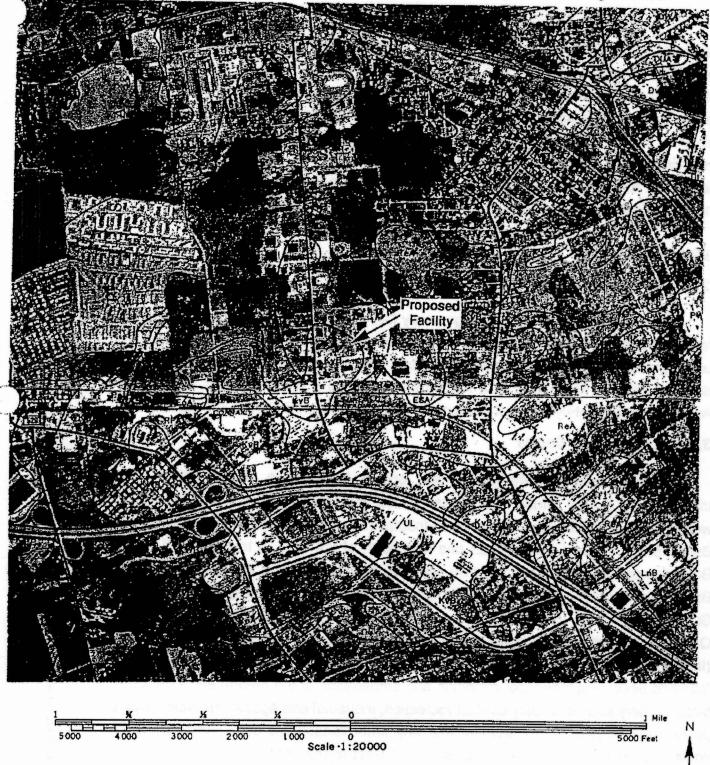


Figure 3-2. Soil Map

approximately four inches thick. A dark reddish brown shale (bedrock) has been identified at depths of 12 inches below grade and generally occurs at depths of less than 20 inches below grade. The soil has a moderately rapid permeability, slow run off, and a low available water capacity. The soil is subject to frost heaving and has a slight erosion hazard. Organic matter content is moderate while plant rooting depth is restricted by the shallow depth to bedrock. The soil is not well suited for woodlands due to the low available water capacity; however, common trees on the Klinesville include northern Red Oak, White Oak, and Chestnut Oak (Powley, 1987).

#### 3.2 Hydrology

#### 3.2.1 Site Drainage

The topography of the site is generally flat, with an elevation of approximately 80 feet above mean sea level (AMSL). The site is currently undeveloped and consists of uncut grass, weeds, bushes and small trees. Surface drainage is generally toward drainage ditches which flow in a northerly direction to a drainage ditch on Montrose Avenue, approximately 600 feet north of the site (RCRA Part B Permit Application).

#### 3.2.2 Surface Water Bodies

Several surface water bodies are located in the area of the facility. Two tributaries of Bound Brook are located 1,000 feet north/northeast and 3,000 feet west/northwest of the site. Both of these tributaries flow north to the confluence with the Bound Brook, slightly greater than one mile north of the site. A tributary to Ambrose Brook located approximately 3/4 mile south of the site drains to the west to Ambrose Brook approximately 2-1/4 miles southwest of the site. According to the NJDEPE Surface Water

Quality Standard, both Bound and Ambrose Brooks are classified as a FW2-NT (freshwater 2-non trout). FW2-NT include waters for which the NJDEPE designated the following uses: maintenance, migration and propagation of the natural and established biota, primary and secondary contact recreation, industrial and agricultural water supply, public water supply after treatment and any other reasonable use. Ambrose Brook flows west and Bound Brook flows south and west to the confluence with the Raritan River, approximately five miles west of the site. The Raritan River then flows south and east to Raritan Bay and the Arthur Kill, approximately nine miles southeast of the site.

According to the Atlas of National Wetlands Inventory Maps for New Jersey (US Department of Interior, Fish and Wildlife Service, 1984), there are two wetland areas within 1/2 mile of the facility along the two tributaries of Bound Brook (see Figure 3-3). These wetlands are located approximately 1,025 feet north and 2,000 feet northwest of the site and are classified as PF01, a palustrine, broad leaved, deciduous, forested wetlands. Approximately 12 percent of Middlesex County (24,022 acres) is classified as wetlands (Atlas of National Wetlands Inventory Maps for New Jersey, 1984).

#### 3.2.3 Area Groundwater

The major aquifer in the area of the facility is the Brunswick Formation. Brunswick Formation contains water in fractures, the size of which generally decrease with depth due to the increasing weight of the overlying rocks. Wells installed in the Brunswick Formation in the Rahway, New Jersey area where more permeable Quaternary deposits overly the Brunswick Formation yield from 2 gallons per minute (gpm) to 660 gpm and average 75 gpm. Wells greater than 6 inches in diameter yield on an average 140 gpm. The more permeable Quaternary deposits overlying the Brunswick Formation in the Rahway area provide recharge for the Brunswick (Anderson, 1968). However, in the area of the site in South Plainfield, residual bedrock soil, as opposed to Quaternary materials overlay the Brunswick Formation. Due to the low infiltration capacity of the overlying sediments, the average yield of the wells installed in the Brunswick in the area of the site tends to be low. In addition, filling of the cracks/fractures in the Brunswick with residual soil may further decrease the average well yields. The Brunswick Formation also has a low storage capacity. Yield from wells with overlying more permeable Quaternary material probably have a yield approximately five times greater than wells installed in areas where Quaternary deposits are absent. The majority of the groundwater taken from the Brunswick Formation in 1941 was from areas overlain by more permeable Quaternary material. (Barksdale, et. all, 1943).

The water of the Newark Group is more highly mineralized than any other groundwater obtained from aquifers in Middlesex County. A majority of the wells tapping the Newark Group yield good water containing less than 200 to 300 parts per million (ppm) of total solids; however, water containing several hundred ppm is not unusual. Also, concentrations of calcium and magnesium are high, while sulfates are high as compared to carbonates and bicarbonates. Chloride concentrations are usually



Figure 3-3. Wetlands Map

fairly low. The Brunswick Formation is sometimes more mineralized than the other formations of the Newark Group (Barksdale, et. all, 1943).

Residences and businesses within the Borough of South Plainfield receive water from the Elizabethtown Water Company (EWC). The sources of the EWC's water supplied to the area of the site are reportedly the Bridgewater Treatment Plant, a surface water intake from the Raritan River, and a well located over two miles north of the site at the intersection of Clinton Street and 8th Street, South Plainfield, New Jersey (personal communication, Ryan Chabria, EWC).

A New Jersey Department of Environmental Protection and Energy Bureau of Water Allocation (NJDEPE-BWA) well search was conducted in order to locate any wells within a 1/2-mile radius of the site. The results of the well search indicated that of the 144 wells identified, 111 were either soil borings or are used for monitoring purposes. Of the remaining 31 wells, 29 were specified as used for domestic purposes, one for industrial and one for an ice skating rink. Of the 31 domestic wells, all but four are located greater than 1/2-mile from the facility. The exact location of the remaining four domestic wells cannot be determined from the well permits and may or may not be located within a 1/2-mile radius of the site. Mr. Michael Bach of the Borough of South Plainfield Board of Health informed GTI that not all residences within the Borough are hooked up to a public water supply. However, Mr. Bach indicated that to his knowledge, all residences on Somerset Ave. are hooked up to a public water supply leaving three domestic wells which may be located within 1/2 mile of the site. Mr. Bach also indicated that there is one residence in Elliott Place (one of the three domestic wells was identified on Elliott Place) that is not hooked up to a public water supply (personal communication, Mr. Michael Bach, Borough of South Plainfield Board of Health).

A search of the NJDEPE-BWA computerized database of water withdrawal points, which includes commercial, industrial, municipal and agricultural water supply wells, and surface water intakes, indicated that no water withdrawal points are located within one-mile of the site. This computerized database also contains a comprehensive site list which includes a list of hazardous waste sites in the area. A total of nine comprehensive site list cases, including the proposed facility, were identified within a 1/2 mile radius and includes the following:

- Metz Metallurgical Corp. 3900 S. Clinton Ave, 0.0 miles Safety Kleen Corporation Skyline Drive, 0.0 miles Platina Refining Labs 4301 S. Clinton, 0.1 miles S
- BH&P Incorporated 800 Montrose, 0.1 miles N/NE

LR Metal Treating - 3651 S. Clinton, 0.1 miles W
Ferro Corporation - 115 Skyline Drive, 0.2 miles E/SE
Jesco Incorporated - 118 Nicholas Ave., 0.2 miles S/SE
Eastern Steel Barrel Corp. - 4100 New Brunswick Ave., 0.5 miles W
Kearny Industries - 2624 Hamilton, 0.5 miles. SE

In addition, according to the NJDEPE-BWA well record files, monitoring wells are present at the following comprehensive site cases: Metz Metallurgical, Platina Labs, Jesco Incorporated, and Kearny Industries. Monitoring wells have also been installed at various other sites within 1/2 mile of the facility including Watchung Spring Water/Med Tech (Rand Street, 0.4 miles N/NW), Atlantic Tool & Dye (South Clinton Ave., 0.2 miles NW), and Continental Precision (701 Montrose Ave, 0.2 miles NE).

#### 3.3 Climate and Air Quality

#### 3.3.1 Climate

The proposed South Plainfield facility is located approximately 15 miles southwest of Newark, New Jersey. Terrain in the vicinity is typically flat and rather marshy. To the northwest are ridges oriented roughly in a SSW to NNE direction. The ridge elevation rises to 200 feet at four to five miles and to 500 to 600 feet at approximately eight miles. All winds between WNW and NNW are downslope and therefore are subject to some adiabatic temperature increase. This effect is evident following a coastal storm or frontal passage. The downslope winds also cause a drying effect, which limits local convectional thunderstorm activity. Winds from the SE also affect temperature as the Atlantic Ocean lies approximately 10 miles away. average annual temperature is approximately 54 degrees. The mean maximum temperature is 62 degrees and the mean minimum temperature is 45 degrees. The maximum recorded high temperature was 105 degrees in 1966 and the maximum low temperature was -7 degrees in 1982.

Temperature falls of 10 to 15 degrees, depending upon the season, are not uncommon when the wind backs from southwesterly to southeasterly. Periods of very hot weather, lasting as long as a week, are associated with the left side of the typical high pressure system known as the "Bermuda High." The WSW flow of air from the high pressure system has a long trajectory over land which increases temperature. Extremes of cold are related to rapidly moving cold-air outbreaks which travel southeastward from the Hudson Bay region. Temperatures of zero or below are experienced in one winter out of four. Average dates of the last occurrence in spring and the first occurrence in autumn of freezing temperatures are April 7 and November 2, respectively.

Northeasters (i.e., strong Atlantic coastal storms) contribute a considerable amount to the annual precipitation. These storms, more typical of the fall and winter, generally last for a minimum of two days and commonly produce between one to two inches of precipitation. Storms producing four inches or more of snow occur on the average of twice a winter with a maximum frequency of five. Snowstorms producing snowfalls of eight inches or more occur in half of the winters. The average sea level pressure is 30.02 inches with extremes of 31.02 and 28.69 inches.

#### 3.3.2 Air Quality

The National Ambient Air Quality Standards (NAAQS) specify concentration levels for various averaging times below which the air quality is considered acceptable with an adequate margin of safety. The six criteria pollutants established under the NAAQS include: sulfur dioxide, inhalable particulate (PM<sub>10</sub>), oxides of nitrogen, carbon monoxide, ozone, and lead. The PM<sub>10</sub> NAAQS were promulgated in 1987 at the Federal level to replace Total Suspended Particulate (TSP). However, the State of New Jersey still maintains the TSP standards under its regulations. New Jersey also maintains a 1-hour secondary standard for ozone which is more stringent than the national standard.

As required by EPA, all areas of New Jersey are classified, for each of the criteria pollutants, as being in compliance with the NAAQS (i.e., attainment), or in violation of the NAAQS (i.e., non-attainment). Middlesex County, the location of the proposed facility, has been designated non-attainment for TSP, and ozone. No areas in the State have been designated non-attainment for oxides of nitrogen, lead, and PM<sub>10</sub>. The entire State of New Jersey has been classified as non-attainment for ozone, with Middlesex County being designated severe non-attainment.

#### 3.4 Ecology

#### 3.4.1 Terrestrial, Aquatic and Rare and Endangered Species

The NJDEPE, Division of Fish, Game and Wildlife (FG&W) was contacted to conduct a search of the NJDEPE-FG&W's computerized fish and wildlife information system database (NINJA Project). The NINJA Project includes information on all vertebrate species of known or verified occurrences within the State of New Jersey. Although the NINJA Project is not complete, verified occurrences of threatened and endangered (T & E) species, the majority of consumptive recreational species and a large number of the interior nesters have been completed. According to the most current NINJA Project information, there has been one verified occurrence of a T & E species within one mile of the site. Two loggerhead shrikes, endangered bird species according to New Jersey, were sighted in the area in 1991. In addition, the loggerhead shrike and henslow's sparrow have been identified by the database in the Borough of South Plainfield. Both of these species of birds are also designated as endangered by the State of New Jersey. No verified occurrences of colonial nesting or migratory bird concentration areas have been identified within a one-mile radius of the facility.

The NINJA Project also provides species lists by Municipality, United States Geologic Survey (USGS) Quadrangles, and County. The following species have been identified in the Plainfield, NJ USGS quadrangle: American shad; white perch; largemouth bass; longtale salamander; common snapping and bog turtles; tundra swan; Canadian goose; American black duck; gadwall; northern pintail; green and blue winged teals; red-shouldered hawk; northern harrier; northern bobwhite; ring-necked pheasant; killdeer; lesser golden plover; greater yellowlegs; spotted sandpiper; red-necked phalarope; American woodcock; semipalmated, western, least, and pectoral sandpipers; glaucous, iceland, great and lesser black backed, herring, ring-billed, and laughing gulls; fosters and common tern; red-headed woodpecker; red-breasted nuthatch; water pipit; loggerhead shrike; henslow's sparrow; river otter; gray squirrel; and white-tailed deer. Of these species identified in the Plainfield, NJ quadrangle, the red-shouldered hawk and the bog turtle are listed as either threatened or endangered by the State of New Jersey. The breeding red-shouldered hawk has been designated as endangered by the State of New Jersey while the non-breeding red-shouldered hawk has been designated as threatened.

#### 3.5 Land Use

The site is designated as part of Lot number 1.03 of Block 446 on the Borough of South Plainfield tax maps. The site comprises approximately 2.5 acres in South Plainfield, New Jersey and is currently undeveloped consisting of uncut grass, weeds, bushes, and small trees. Safety Kleen purchased the parcel of land on 24 April 1987. The proposed facility will consist of a 10,000 square foot warehouse with offices and a container storage area, a 10,000 square foot warehouse for container storage, and three 15,000 gallon aboveground storage tanks containing spent solvent, solvent product, and waste oil.

According to the official zoning map of the Borough of South Plainfield, property within the Borough is zoned as residential, business professional office (& research) and industrial. The site is zoned M-3, industrial. The area immediately surrounding and within 1/4 mile of the site is also zoned M-3 and is devoted to light industrial uses. To the north of the site are properties owned by C. and Arthur Pulitzer and New Era Industrial Development Company (which is presently a vacant building). Last of the site are the Ferro Corporation and property owned by Edgar Otto which houses Therma-Plate Corporation (manufacturing and engineering) and Therma Systems Corporation. Trans-American Trucking Service is located south of the site on property owned by Ronald McGraw. The site is bordered to the west by one property owned by Thermo National Industries, Inc., which houses LR Metals Treating, and two properties owned by Laka Corporation which includes J&H Berg, Inc. (Scientific Supplies since 1811) and a vacant lot.

The only area not zoned for industrial use within 1/2 mile of the facility is located approximately 1,500 feet east of the site and contains private residences. This residential area (zoned R-2 and R-10) is comprised of single-family residences east of 2nd Street. There are no known schools, churches, public parks, hospitals, or cemeteries within 1/2 mile of the facility. The closest school is Roosevelt School, almost 3/4 mile northeast of the site at the corner of Jackson Avenue and Evona Place. The closest park (Southside Borough Park) is located approximately 3/4 miles north/northeast of the site at the intersection of Pitt Street and Amboy Avenue.

#### 3.6 Socioeconomic

#### 3.6.1 Population and Housing

At the time of the 1990 U.S. Census, the population of South Plainfield was 20,489 people with a population density of 2,451.75 people per square mile. The median household income in the Borough of South Plainfield in 1989 was \$51,198 while the per capita income was \$18,046. According to the 1990 census, approximately 50% of the working population (5,457 out of 11,004 people) were employed within Middlesex County (U.S. Census, 1990).

Housing available to residences within South Plainfield includes single-family residences, multi-family residences, and a nursing home. According to the 1990 census, there were 6,823 housing units in South Plainfield, of which 98.3% were owner or renter occupied (1.7% vacancy rate). Of the 6,823 housing units, 6,050 units were single family detached and 287 were single family attached. An additional 432 units were multifamily units, five mobile homes/trailers, and 29 units specified as "other" on the 1990 Census. The mean value of an owner occupied housing unit in South Plainfield in 1990 was \$161,200 (U.S. Census, 1990).

The population of Middlesex County was 671,780 at the time of the 1990 U.S. Census, an increase of 87,967 people since 1970. By the year 2000, the population of the County is estimated to be 757,000. In 1990, there were an estimated 250,174 housing units, an increase of approximately 45.7% in housing units since 1970.

#### 3.6.2 Local Economic Activity

The site is located in an industrially zoned area of the Borough of South Plainfield. South Plainfield was fairly rural through the 1940s. The population increased from approximately 5,300 in 1940 to 17,879 by 1960. Industrialization in South Plainfield was initiated by the New York Branch of the Lehigh Valley Railroad which made South Plainfield their "yard" in the 1870's. In 1912, the Spicer Manufacturing Company moved into the area followed by Rock Wool Corp. and Harris Steel. Busin ess and industry located within a 1/2 mile radius of the site includes various warehouses Tires), International, Toyo Warehouse, Mitsubishi Metal (American supply/distributing companies (machinery rental/sale, scientific supplies, fire protection supplies, fruit and vegetable wholesale), various steel and metal companies, and several service industry companies (bank, hotel, commercial fleet maintenance, trucking, networking & consulting, messenger service).

In 1991, there were 10 major non-residential developments in South Plainfield along Route 287 (south and east of the site) including offices, hotels, and commercial buildings. There are three primary Hotels and Conference Centers and three major shopping areas comprising over 100 stores in South Plainfield. There are 10 major office and industrial parks listed in South Plainfield which comprise office, distribution, and light and heavy industry. Four of these parks are located within 1/2 mile of the site. Three are located approximately 1/4 mile east of the site in the area of Montrose Avenue and Kennedy Road and include light and heavy industry. The fourth is located greater than 1/4 mile northwest of the site and consists of offices.

According to the 1990 U.S. Census of South Plainfield, there were 2,262 persons involved in the manufacturing of durable and non-durable goods and 1,892 persons in retail trade. A total of 3,122 persons were employed in the following service industries: business and repair, personal, entertainment and recreation, and professional and related services (health, education, etc.). Finance, insurance and real estate employed 956 persons. Construction, transportation, communications and other public utilities, and wholesale trade each employed between 500 and 651 persons each. A total of 330 persons were employed in public administration while agriculture, forestry & fisheries and mining employed 132 and 27 people, respectively.

The estimated employed population of Middlesex County was 385,000 in 1990. The top five employers in the County are AT&T, Supermarket General, Johnson & Johnson, Bellcore, and Revlon. In 1987, approximately 25% of employment in Middlesex County was in the manufacturing industry, which was especially strong in chemicals, primary metals, and fabricated metals. However, the predominant area for future employment growth is in the non-manufacturing sector. Currently, non-manufacturing employment includes wholesale (34,441 workers), retail sales (57,977 workers) and services (67,138 workers).

#### 3.6.3 Transportation

Skyline Drive, maintained by the Borough of South Plainfield, is the major access road to the site. Truck traffic to and from the site will include vans, trucks, tanker trucks, and box trailers. The majority of vehicular traffic and loading/unloading operations will occur at the return and fill station in the warehouse. Vans will travel to and from the

proposed facility and its customers daily. Trucks will be dispatched from the site to deliver and pick up fresh and used solvents. Tanker trucks will enter the facility through the northeast gate, travel counterclockwise, empty and fill the tanks and then leave through the northeast gate. All trucks will use Skyline Drive as an access to I-287 (RCRA Part B Permit Application, Section 1.2.1)

The proposed facility will not alter local traffic patterns since the site is located in an area already travelled by trucks. The facility does not plan to use railways for transportation purposes.

#### 3.6.4 Emergency Services

The Borough of South Plainfield has a Volunteer Fire Department, a Police Department and a Volunteer Rescue Squad to service the Borough. There are two fire houses located in South Plainfield; however, only one is presently open. The open fire station is located approximately 1-1/2 miles northeast of the site on Plainfield Avenue. This fire station houses three fire engines with a capacity of 15,000 gallons per minute (gpm) each and four support trucks. An additional 95 foot platform truck also with a 15,000 gpm capacity is to be delivered the week of 19 July 1993. The Borough of South Plainfield Fire Department has a total of 45 personnel, including three full time and 42 volunteer firemen. The South Plainfield Fire Department also has a Fire Prevention Bureau which conducts fire inspections for industrial and commercial properties located in the Borough. Based on a building's uniform fire code classification, inspections are performed a minimum of one to a maximum of four times per year (personal communication, Inspector Abbruzzese, South Plainfield Fire Department).

The Borough of South Plainfield is also serviced by the Middlesex County Hazmat Unit. The Hazmat Unit is located at the Fire Academy in Sayreville, New Jersey and consists of 13 personnel, 5 emergency response trucks, 1 decontamination truck, and 1 chemical response truck (personal communication, Mr. Al Trimpert, Middlesex County Hazmat Unit).

The Borough of South Plainfield Police Headquarters are located at Borough Hall on Plainfield Avenue approximately 1-1/2 miles north/northeast of the site. There are 54 full time policemen on the South Plainfield Police Force with 10 marked patrol cars (personal communication, Sgt. Merkler, South Plainfield Police Department).

Ambulance service to South Plainfield is provided by a volunteer Rescue Squad located on Plainfield Avenue two buildings south of the Borough Hall. The Rescue

Squad has three ambulances, 42 volunteers, and provides ambulance service to the Borough 24-hours a day, 7-days a week. The rescue squad is dispatched through the South Plainfield Police Department (personal communication, Mr. Michael Zushma, Borough of South Plainfield Emergency Management Coordinator).

#### 3.7 Local Government Jurisdictions

The site is wholly located within the Borough of South Plainfield, Middlesex County, New Jersey. Middlesex County consists of 25 separate municipalities and has a seven member Board of Chosen Freeholders including a director and a deputy director.

#### 3.8 Historical and Archeological Resources

#### 3.8.1 Historical Resources

An inventory of Historic, Cultural, and Architectural Resources was prepared for the Middlesex County Cultural and Heritage Commission Board of Chosen Freeholders from 1977 - 1979 by Heritage Studies located in Princeton, New Jersey. This inventory identified all historic sites of interest in Middlesex County in order to rank a site's eligibility for the New Jersey and National Registers of Historic Places. number 21 assessed sites in South Plainfield, New Jersey. In 1985, a supplement to this inventory was prepared by Robert P. Guter and Janet W. Foster. According to these two inventories, there are no sites within the Borough of South Plainfield listed on the New Jersey or National Registers of Historic Places and only one site (site 21-19 as identified in the Inventories) which is eligible for the Registers. Site 21-19 is the site of the former Laing Randolph Mill located on Cedar Brook near the Plainfield Avenue Bridge, greater than 1-1/4 miles northeast of the site. This site was eligible for the Registers based on its historic and potential archeological significance. However, as of 1989, no historic sites in South Plainfield were listed on the New Jersey or National Registers (personal communication, Susan Kittridge, Middlesex County Cultural Heritage Commission). According to the inventories, there are however several sites of historic significance in South Plainfield. Only one of these sites, the Runyon House, is located within 1/2 mile of the site, approximately 2,000 feet to the southeast. The house

dates to approximately 1760, is a vernacular type building, and at the time of the inventory was boarded up.

#### 3.8.2 Archeological Resources

The New Jersey State Museum, Archeology/Ethnology Bureau (the Bureau) was contacted in order to determine the existence of any archeological sites in the area of the facility. According to the Bureau, there is one known archeological resource within 1/2 mile of the facility located slightly greater than 1,000 feet to the east. This site was identified as 28-Mi-37 by the New Jersey State Museum. There are four additional archeological resources identified as being located slightly greater than 1/2 mile from the facility.

#### 3.9 Aesthetics

The site is located in an industrially zoned section of South Plainfield, New Jersey. The facility is surrounded by light and heavy industry, warehouses, and trucking companies. Nine comprehensive site list cases, including the proposed Safety Kleen facility, were identified within 1/2 mile of the site. Therefore, the proposed facility will not significantly alter the aesthetics of the area.

#### 3.10 Noise

The Borough of South Plainfield enacted a noise ordinance (Ordinance No. 918, Chapter 135) in 1982. Business activities conducted at the facility will be in compliance with the maximum permissible sound levels delineated in Section 135-5. Emergency response activities are exempt from this section. These sound levels are as follows:

- Continuous airborne sound which as a sound level in excess of sixty-five (65) dBA.
- Continuous airborne sound which has an octave band sound-pressure level in decibels which exceeds the values listed below in one (1) or more octave bands:

Octave Band Center Frequency (Hz)	Octave Band Sound- Pressure Level (db)
31.5	96
63	83
125	74
250	67
500	63
1,000	60
2,000	57
4,000	55
8,000	53

Impulsive sound in air which has an impulsive sound level in excess of eighty (80) decibels.

Testing of emergency alarms will also be performed in accordance with the ordinance, Section 135-3B(9)(b).

## SECTION 4 ENVIRONMENTAL IMPACT ANALYSIS

This section of the Environmental Health and Impact Statement (EHIS) evaluates potential impacts of the proposed facility to the surrounding area. Potential impacts to soils, groundwater, surface water, air quality and wildlife and natural resources of the area are discussed below.

#### 4.1 Geology

The proposed Safety Kleen facility is located in an industrialized area of the Borough of South Plainfield. As part of the RCRA Part B Permit Application, Safety Kleen has identified sources of potential spills at the site. Contingency plans and response procedures in case of emergencies have also been defined.

building areas of the site being covered with bituminaus paving, concrete paving, or gravel. The proposed areas for storage and handling of waste materials (the above ground storage tanks, container storage areas, and return and fill station) will be provided with secondary containment. The three 15,000 gallon above ground storage tanks will be installed in a diked area and each will be equipped with an audio/visual high level alarm. In summery, it is not anticipated that the construction and operation of the proposed facility will impact the subsurface of the site.

#### 4.2 Water Quality

The areas in which hazardous waste will be stored at the facility are provided with secondary containment to prevent waste from impacting surface or ground water. Surface water drainage from the facility will be managed under Safety-Kleen's group NPDES permit and stormwater runoff will comply with the effluent limitations set forth in the NPDES permit. As discussed in Section 3.2, the primary source of water for residences and businesses in the area is the Elizabethtown Water Company whose water sources are more than two miles from the site. Up to four private water wells may be located within 1/2 mile radius of the facility, however, due to the management

practices described above, the Safety-Kleen facility should have no adverse impacts on surface or ground water. There are no wetlands present on the site of the s

#### 4.3 Ecology

As discussed in Section 3.4, the NJDEPE, Division of Fish, Game, and Wildlife, has determined that there are not verified occurrences of colonial nesting or migratory bird concentration areas within a one mile radius of the site. Two loggerhead shrikes, an endangered bird species according to New Jersey, were sited within one mile of the proposed facility in 1991. However, because the area around the proposed Safety-Keen guilly has already been developed for inclusing use, the proposed facility will have no additional impact to possible threatened or endangered species.

#### 4.4 Air Quality

Normal operation of the proposed Safety-Kleen facility in South Plainfield will involve several air emission sources. Potential sources of air emissions include tanks located within an aboveground tank farm and wet dumpsters operating as part of the return and fill station located in the warehouse. The proposed facility will be a source of volatile organic compound (VGC) emissions—Further review of the proposed operation and liquid organic materials involved indicates that several Toxic Volatile Organic Substances (TVOS) may be released from some or all of the sources. The following section provides a brief discussion of the emission sources and estimated emission rates, and the results of an air dispersion modeling analysis performed in support of this EHIS.

#### 4.4.1 Source Description

Several sources of air emissions at the proposed facility are regulated under the New Jersey Air Regulations, and Solid and Hazardous Waste Regulations. The air emission sources, the waste tanks and wet dumpsters, are discussed below.

One horizontal carbon steel fixed-roof storage tank with a maximum storage capacity of approximately 15,000 gallons is used to store spent parts washer fluid (mineral spirits-based). The tank is 18.0 feet in length and 12.0 feet in diameter. Spent parts washer fluid is pumped from the return and fill station and into the storage tank through a submerged fill pipe. The tank is installed with two other tanks storing waste

oil and fresh product (i.e., parts washer fluid) within a partially enclosed building. The structure is approximately 22 feet tall and is located on the east end of the property with a base elevation of approximately 83 feet. A VOC emission summary for the spent parts washer fluid tank is provided in Table 4-1. Emission calculations are given in Appendix B. Emission estimates for xylene and ethylbenzene are also provided on a 24 hour basis due to the applicability of 24-hour air quality standards (i.e., RfC) to those two chemicals.

The waste oil tank is a horizontal carbon steel fixed-roof storage tank with a maximum storage capacity of approximately 15,000 gallons. The tank is 18.0 feet in length, and 12.0 feet in diameter. Waste oil is pumped directly into the tank from a tanker truck. The waste oil has a boiling point greater than 400° C. Breathing and working losses from storage of this material are negligible.

Since the tanks are inside a partially enclosed building, and the emissions from the spent parts washer fluid tank are fugitive in nature, the tank farm was modeled as an individual volume source. The tank farm was assigned a unit emission rate (1 gram/second). Actual emission rates of VOC and TVOS emitted from the tank farm (Table 4-1) were multiplied by a normalized modeled concentration to obtain chemical-specific concentrations associated with the spent parts washer fluid tank. Table 4-2 lists the volume source parameters for the facility. The initial lateral (i.e., \_yo) and vertical (i.e., \_zo) dimensions of the volume source were calculated using procedures in Table 3-1 of the User's Guide for the Industrial Source Complex (ISC2) Dispersion Models (EPA, 1992), which states that \_yo is the length of side divided by 4.3. The square side length of the tank farm building was used to calculate \_yo. Table 3-1 states that \_zo is calculated by dividing the building height by 2.15. The release height was taken as the center of the source, or half the building height.

The wet dumpsters are used to transfer spent parts washer fluid to the storage tank. Although three wet dumpsters are currently authorized for construction at the facility, this air quality assessment has been completed under the assumption that four wet dumpsters are in use at the facility, to allow for facility expansion. Each dumpster is approximately three feet wide and five feet long with a top area of approximately 15 square feet. The height of each dumpster is approximately 40 inches.

The four wet dumpsters are inside the return and fill station, which is within the warehouse. The portion of the building in which the dumpsters are installed is enclosed

TABLE 4-1. SAFETY-KLEEN SOUTH PLAINFIELD EMISSION RATES

Source	Substance	Emission Rate (each unit) (Ton/yr)	Emission Rate (each unit) (lb/yr)	Emission Rate (each unit) (lb/hr)	Emission Rate (each unit) (g/s)	Total Emission Rate (lb/yr)	Total Emission Rate (lb/hr)	Total Emission Rate (g/s)
Spent Mineral	Perchioroethylene	1.85E-04	0.37	4.22E-05	5.32E-06	3.70E-01	4.22E-05	5,32E-06
Spirits	Trichloroethylene	1.15E-04	0.23	-2.63E-05	3.31E-06	2.30E-01	2.63E-05	3.31E-06
Tank	Styrene	1.70E-04	0.34	3.88E-05	4.89E-06	3.40E-01	3.88E-05	4.89E-06
	Xylenes*	1.39E-03	2.79	3.18E-04	4.01E-05	2.79E+00	3.18E-04	4.01E-05
	1,2-Dichlorobenzene	5.00E-06	0.01	1.14E-06	1.44E-07	1.00E-02	1.14E-06	1.44E-07
	1,4-Dichlorobenzene	5.00E-06	0.01	1.14E-06	1.44E-07	1.00E-02	1.14E-06	1.44E-07
	Methylene Chloride	4.10E-04	0.82	9.36E-05	1.18E-05	8.20E-01	9.36E-05	1.18E-05
	1,1,1-Trichloroethane	8.25E-04	1.65	1.88E-04	2.37E-05	1.65E+00	1.88E-04	2.37E-05
	Toulene	1.85E-04	0.37	4.22E-05	5.32E-06	3.70E-01	4.22E-05	5.32E-06
	Ethylbenzene*	2.08E-04	0.42	4.75E-05	5.99E-06	4.16E-01	4.75E-05	5.99E-06
Dumpsters (4 units)	Perchloroethylene	1.21E-03	2.42	2.76E-04	3.48E-05	9,68E+00	1.11E-03	1.39E-04
(4 units)	Trichloroethylene	8.09E-04	1.62	1.85E-04	2.33E-05	6.47E+00	7.39E-04	9.31E-05
	Styrene Xylenes	1.06E-03	2.12	2.42E-04	3.05E-05	8.48E+00	9.68E-04	1.22E-04
		2.31E-03	4.62	5.27E-04	6.65E-05	1.85E+01	2.11E-03	2.66E-04
(	1,2-Dichlorobenzene	7.74E-05	0.15	1.77E-05	2.23E-06	6.19E-01	7.07E-05	8.91E-06
	1,4-Dichlorobenzene	9.29E-06	0.02	2.12E-06	2.67E-07	7,43E-02	8.48E-06	1.07E-06
	Methylene Chloride	2.38E-03	4.76	5.43E-04	6.85E-05	1,90E+01	2.17E-03	2.74E-04
*	1,1,1-Trichloroethane	6.04E-03	12.08	1.38E-03	1.74E-04	4.83E+01	5.52E <b>-03</b>	6.95E-04
-	Toulene	1.26E-03	2.52	2.88E-04	3.62E-05	1.01E+01	1.15E-03	1.45E-04
	Ethylbenzene	1.94E-04	0.39	4.43E-05	5.58E-06	1.55E+00	1.77E-04	2.23E-05

<sup>\*</sup> Emissions calculations based on 24-h period.

TABLE 4-2. VOLUME SOURCE SUMMARY

Source	Source Location	Base Elev.	Source Height	Sigma Y	Sigma Z	ISC2ST Source Name
		(ft)	(m)	(m)	(m)	
Spent Mineral Spirits Storage Tank	Above Ground Tank Farm	83	3.251	3.544	3.024	TANKFARM
1000 2000 1000 1000	Building Height= 22,33 ft Building Length= 72 ft Building Width= 35 ft Side Length= 50 ft					
	The state of the				1,141	
Dumpsters (4 units)	Return/Fill Station	84.5	3.251	7.088	3.024	DUMPSTRS
	Building Height= 22.33 ft Building Length= 80 ft Building Width= 125 ft Side Length= 100 ft				The second	

with roll-up doors. The fugitive emissions from the wet dumpsters were modeled as one individual volume source. The volume source was assigned an emission rate of 1 g/s. The emission rates of chemicals emitted from all of the wet dumpsters were applied to a normalized modeled concentration to obtain chemical-specific concentrations. The initial lateral (i.e., \_yo) and vertical (i.e., \_zo) dimensions of the volume source were calculated using procedures in Table 3-1 of the <u>User's Guide for the Industrial Source Complex (ISC2) Dispersion Models (EPA, 1992)</u>. Table 4-2 provides a summary of modeling data used for all volume sources. The square side length of the return and fill building divided by 4.3 was used to calculate \_yo. The technique of dividing the building height by 2.15 was employed to calculate \_zo.

Potential VOC emissions were calculated in order to determine whether the proposed emissions levels would exceed 25 tons per year and therefore, be defined as a major source pursuant to NJAC 7:27-18. As can be observed from Table 4-1 and Appendix B, the facility-wide potential VOC emission rate is 0.065 tpy. Annual VOC emissions from the proposed facility are less than 25 tpy; therefore, the proposed facility is not defined as a major source.

#### 4.4.2 Modeling Procedures

The following section discusses the dispersion modeling techniques used to predict the ambient air quality impact from each emission source at the proposed facility.

#### Model Selection--

Due to the nature of the emissions at the facility (i.e., fugitive), all of the sources were characterized as volume sources. Screening models, such as EPA SCREEN, do not include volume source algorithms. The regulatory dispersion model that adequately addresses volume sources is the Industrial Source Complex (ISC2) Model. The latest version (930419) of the ISC2 dispersion model was selected. The ISC2 Model employed was the Short Term version, or ISC2ST.

The regulatory default option, which automatically selects the EPA recommended options for plume rise, buoyancy induced dispersion, vertical temperature gradients, wind profile exponents, etc. was used for the modeling demonstration. The ISC2 Model incorporates actual National Weather Service (NWS) meteorological data which provides a more realistic dispersion scenario for longer term averaging times. The

ISC2ST Model was used in the period mode to account for annual VOC and TVOS emissions (i.e., long-term averaging periods). The ISC2ST Model was also used in the 1-hour mode to estimate xylene and ethylbenzene concentrations, since both constituents have a 24-hour RfC, all other VOCs and TVOCs have annual based threshold values. The NJDEPE conversion factor of 0.4 was used to derive a 24-hour average concentration from the short-term (1-hour) averaging period. All model units are metric excluding receptor terrain elevations which were input in feet. The output tables display the five highest concentrations for each source group in micrograms per cubic meter (@g/m³).

Due to the extensive heavy industrial use surrounding the facility, urban dispersion coefficients were used in all dispersion modeling.

Good Engineering Practice (GEP) Stack Height Analysis-

A GEP stack height analysis was not conducted for the proposed facility since there are no point sources at the facility. Any downwash due to the cross-sectional area of the volume source is inherently included in the initial dilution of the plume. Further GEP and cavity analyses are not required.

#### 4.4.3 Modeling Results--

For the 24 hour screening analysis for xylene and ethylbenzene, a generic meteorological data set was used, which is described below. The refined modeling analysis used actual meteorological data obtained from the EPA SCRAM Bulletin Board System. Upper air data was acquired from the Atlantic City, New Jersey NWS with surface data acquired from the Newark, New Jersey NWS. The selected NWS stations are the nearest, most representative stations for the South Plainfield facility.

The ISC2ST model was run with a 1 hour averaging time to account for hourly emissions of xylene and ethylbenzene. A 24 hour averaging time for the ISC2ST model was not considered since the RfC 24 hour averaging period is a running average. A NJDEPE conversion factor of 0.4 was applied to the maximum 1 hour concentration to convert to a 24 hour maximum concentration. This resulting concentration was then compared to threshold values.

In this 24 hour screening analysis, the ISC2ST model was run with "worst-case" meteorological data (i.e., 51 combinations of windspeed and stability) typically used for the PTPLU model. The meteorological data is provided in Appendix C. These

meteorological data are further described in NJDEPE <u>Guidance on Preparing an Air Quality Modeling Protocol (NJDEPE, 1992)</u>. This "worst-case" meteorological data file encompasses all wind directions (360°) and all stability classes (including E and F with 1.0 m/s windspeeds). Table 4-3 presents the results of the 24 hour screening. Predicted concentrations for both xylene and ethylbenzene were below the threshold values. The ISC2ST screening results are provided in Appendix D.

The ISC2ST Model was run in the period mode (i.e., annual) to calculate an annual concentration for VOC and TVOS (other than xylene and ethylbenzene) emitted at the facility. In the annual analysis, a five year data set from 1985 to 1989 was used for the annual ISC2ST runs as required for the EHIS. A summary displaying the resulting normalized annual concentrations for each source for 1985-1989 is provided in Table 4-4.

The highlighted values represent the second-highest maximum concentration (regardless of receptor location) out of the five year meteorological data set. These data were used in all RfC and unit risk factor (URF) calculations. Actual emission rates were applied to the second-highest normalized concentration for each respective source group. As described in Section 4.6, threshold values were not exceeded for any TVOS. Input and output data for the ISC2ST annual runs are provided in Appendix E.

The receptor grid used in the refined modeling analysis covered a large area with various terrain ranges to adequately determine the maximum offsite impacts. Discrete receptors surrounding the immediate property line area were modeled at intervals of every 15 meters. A dense array of discrete receptors extending to surrounding properties was employed. This discrete receptor collection covers all nearby public roads, businesses, and fencelines. Due to the nature of the sources (i.e., volume) the expected maximum impacts are at or near the fenceline. Public access to the facility is restricted. There are no schools or churches known to exist within a 1/4 mile from the facility. However, sensitive receptors beyond a 1/4 mile radius such as the Roosevelt School, Sacred Heart Church, Conrail Railroad, and Interstate 95 were modeled. Actual terrain heights for each receptor in the modeling analysis were used as input. Terrain elevations were derived from the USGS topographic map and Safety-Kleen Site Plan provided in the RCRA Part B Permit Application.

TABLE 4-3. SUMMARY OF 24 HOUR SCREENING

Source	Chemical	CAS Number	ISCST2 SCREEN (max. conc.) Results (ug/m3)	Actual Emission Rate per Source Group (g/s)	NJDEPE Conv. Factor	Adjusted 24 Hr Conc. (ug/m3)	NJDEPE RfC Conc. (ug/m3)	RfC Exceeded?
Spent Mineral Spirits Tank	Xylenes	78-93-3	12284.06	4.01E-05	0.4	0.20	165	No
	Ethylbenzene	100-41-4	12284.06	. 5.99E-06	0.4	0.03	1000	No
Dumpsters (4 units)	Xylenes	78-93-3	4156.65	6.65E-05	0.4	0.11	165	No
(4 units)	Ethylbenzene	100-41-4	4156.65	5.58E-06	0.4	0.01	1000	No
			LENE CONC Hylbenzen	ENTRATION: ECONCENTRA	TION:	0.34 0.01	165 1000	No 3

TABLE 4-4. SUMMARY OF NORMALIZED ANNUAL CONCENTRATIONS

Model Run #	Source Group	Year of Meteorological Data	Maximum Modeled Concentration (ug/m3)
1	Dumpsters Tank Farm	1989	141.26 692.89
2	Dumpsters Tank Farm	1988	161.79 710.93
3	Dumpsters Tank Farm	1987	148.07 688.12
4	Dumpsters Tank Farm	1986	120.13 580.60
5	Dumpsters Tank Farm	1985	135.67 709.96

<sup>\*</sup> Shaded areas indicate 2nd-Highest maximum concentration used in the risk analysis.

#### 4.5 Noise

The facility will operate within the guidelines set forth in the Noise Ordinance for the Borough of South Plainfield, as described in Section 3.10. Therefore, there will be no adverse environmental impacts associated with noise from the proposed facility.

#### 4.6 Human Health

The only potential adverse effects on human health from the proposed facility are via the air pathway. Modelling of emissions from the proposed facility is described in Section 4.4. A discussion of emission rates for possible carcinogenic and non-carcinogenic VOC and TVOS is provided below.

The only oftendeds emitted from the facility with a 24 from the are xylene and ethylbenzene. The 24 hour screening analysis described in Section 4.4.3 demonstrated compliance with the respective reference concentrations and further analysis is not required for these particular substances.

The remaining TVOS and VOC emitted from the facility have annual based threshold values. Table 4-5 provides a summary of adjusted modeled concentrations and the comparison to the applicable RfC values for each subject chemical by source.

At RfC (noncarcinogens) facility summary is furnished in Table 4-6, which presents a maximum facility concentration and comparison to the respective RfC values. Compliance was demonstrated for all TVOS and VOC emitted. Therefore, there will be no adverse effects on human health associated with air emissions from the proposed facility. In addition to the RfC analysis perchloroethylene, styrene, trichloroethylene, and methylene chloride are also listed on the NJDEPE carcinogenic chemical and have associated URF values. Table 4-7 summarizes the adjusted model results and calculated incremental risk for these respective carcinogens for the facility. Each individual carcinogen is below an incremental risk of one in one million (1 x 10<sup>-6</sup>). In addition, the aggregate risk from the four subject carcinogen is also less than 1 x 10<sup>-6</sup>.

#### 4.7 Aesthetics

As described in Section 3.9, the site is in an industrially zoned section of South Plainfield, New Jersey. The proposed facility is surrounded by light and heavy industry,

# TABLE 4-5. SUMMARY OF PREDICTED TVOS IMPACT CONCENTRATIONS BY SOURCE

Source	Substance	CAS	ISCST2	Actual	Adjusted	RfC	RfC
		Number	Results	Emission	Conc.	Conc.	Exceeded?
			(max.)*	Rate			
	,		(ug/m3)	(g/s)	(ug/m3)	(ug/m3)	,
	Perchlorethylene	127-18-4	709.96	5.32E-06	3.78E-03	81	No
Sport Minoral	Trichloroethylene	79-01-6	709.96	3.31E-06	14.7.5	300	No
	Styrene	100-42-5	709.96	4.89E-06		1000	No
opins rank	1,2 Dichlorobenzene	95-50-1	709.96	1.44E-07	1.02E-04	200	No
	1,4 Dichlorobenzene	106-46-7	709.96	1.44E-07	1.02E-04	700	No
	Methylene Chloride	75-09-2	709.96	1.18E-05		3000	No
	1,1,1-Trichloroethane	71-55-6	709.96	2.37E-05	1.68E-02	1000	No
	Toulene	100-88-3	709.96	5.32E-06	3.78E-03	68	No
	Perchlorethylene	127-18-4	148.07	1.39E-04	1	81	No
	Trichloroethylene	79-01-6	148.07	9.31E-05	1.38E-02	300	No
Dumpsters	Styrene	100-42-5	148.07	1.22E-04	1.81E-02	1000	No
(4 units)	1,2 Dichlorobenzene	95-50-1	148.07	8.91E-06		200	No
	1,4 Dichlorobenzene	106-46-7	148.07	1.07E-06		700	No
	Methylene Chloride	75-09-2	148.07	2.74E-04		3000	No
	1,1,1-Trichloroethane	71-55-6	148.07	6.95E-04		1000	No
	Toulene	100-88-3	148.07	1.45E-04	2.15E-02	68	No

<sup>\*</sup> Based on 2nd Highest Maximum Concentration out of 5-year meteorological data set.

TABLE 4-6. FACILITY SUMMARY OF NONCARCINOGIC COMPOUNDS

Substance	CAS Number	Facility Total Maximum*	RtC Concentration	RfC Exceeded?
	LICE	Adjusted Concentration (ug/m3)	(ug/m3)	
	127-18-4	2.44E-02	81	No
Perchloroethylene	79-01-6	1.61E-02	300	No
Trichloroethylene	100-42-5	2.15E-02	1000	No
Styrene 1,2 Dichlorobenzene	95-50-1	1.42E-03	200	No
1,4 Dichlorobenzene	106-46-7	2.60E-04	700	No
	75-09-2	4.89E-02	3000	No
Methylene Chloride 1,1,1-Trichloroethane	71-55-6	1.20E-01	1000	No
	100-88-3	2.52E-02	68	No
Toulene	78-93-3	3.08E-01	165	No
Xylenes Ethylbenzene	100-41-4	3.87E-02	1000	No

\* Summation of all sources which emitted particular chemical.

**TABLE 4-7. CARCINOGEN RISK SUMMARY** 

Source	Substance	CAS	ISCST2	Actual	Adjusted	Unit Risk	Incremental
		Number	Normalized	Emission	Model	Factor	Risk
			Maximum*	Rate	Concen.	URF	IR
			Concen.				
			(ug/m3)	(g/s)	(ug/m3)	1/(ug/m3)	
						4 405 05	5.29E-08
Spent Mineral	Perchloroethylene	127-18-4		5.32E-06	3.78E-03	1.40E-05	
Spirits Tank	Styrene	100-42-5	709.96	4.89E-06	3.47E-03	5.70E-07	1.98E-09
•	Trichloroethylene	79-01-6	709.96	3.31E-06	2.35E-03	1.00E-05	2.35E-08
	Methylene Chloride	75-09-2	709.96	1.18E-05	8.37E-03	4.70E-07	3.94E-09
	1,1,1-Trichloroethane **	71-55-6	vo hara zi		damı Ar		
		127-18-4	148.07	1.39E-04	2.06E-02	1.40E-05	2.89E-07
Wet Dumpsters	Perchloroethylene	100-42-5		3.05E-05	4.52E-03	5.70E-07	2.57E-09
(4 units)	Styrene	79-01-6	148.07	2.33E-05	3.45E-03	1.00E-05	3.45E-08
	Trichloroethylene		148.07	6.85E-05	1.01E-02	4.70E-07	4.76E-09
	Methylene Chloride	75-09-2	140.07	0.652-05	1.012-02	1.702.07	,
	1,1,1-Trichloroethane **	71-55-6	Tions I vi	Marian Salahan			
* Based on 2nd	Highest Maximum Concent	ration out o	ıf	TOTAL FISIO	Perchloro	thylene	3.41525-07
	logical data set.				Styrene		(0.02 × 0.03
a-year meteoro	ogious data con			Franklin in I	Trichloroe	thylene	5,7046E-08
	oothane was on the NJDEP	E carcinon	on list		Methylene	77)	9.7003E-09

<sup>\*\* 1,1,1</sup> Trichloroethane was on the NJDEPE carcinogen list, but had no URF value.

warehouses and trucking companies. Therefore, the proposed facility will not alter the aesthetics of the area.

#### 4.8 Socioeconomic

#### 4.8.1 Population and Housing

There are no known schools, churches, public parks, hospitals or cemeteries within 1/2 mile of the proposed facility. The site itself and area within 1/4 mile of the site is zoned M-3 - Industrial. The only area within 1/2 mile of the site that is zoned residential is located approximately 1,500 feet east of the site. This area is comprised of single family residences. Construction of the Safety-Kleen facility will not affect the existing or future population and housing in the area.

#### 4.8.2 Local Economic Activity

The proposed South Plainfield facility is located in an industrial area of South Plainfield. The facility's impact on land values will be minimal because the immediate area has already been developed by other light industries. Construction and operation of the facility may have a positive impact on the area due to jobs created by construction and operation of the facility.

#### 4.8.3 Transportation

The proposed facility will not add significant additional traffic to the already industrialized area of South Plainfield in which it will be located. Fifteen to twenty vans will be located at the facility to service Safety-Kleen customers. Tanker trucks and box trailer truckers will also access the facility periodically to deliver products and remove containerized or bulk wastes. This small increase in traffic will not cause a significant impact on the area.

#### 4.8.4 Emergency Services

Communication with the local providers of emergency services, as described in Section 3.6.4, indicates that current fire, police and emergency response units are adequate to respond to emergency situations that may occur at the South Plainfield facility.

#### **SECTION 5**

#### **UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS**

#### 5.1 Construction and Normal Operations

The following sections provide a discussion of some impacts associated with construction and operation of the South Plainfield facility. No major unavoidable environmental impacts are anticipated as a result of construction and normal operation of the South Plainfield facility.

#### 5.1.1 Construction of the Facility

Some short term environmental impacts may result from construction of the South Plainfield facility. These impacts may include minor noise impacts from construction machinery, some dust generation, and some erosion. Construction will be planned to minimize these short term impacts on the area around the facility. These impacts will be similar to the impacts resulting from any type of construction activity.

#### 5.1.2 Normal Operation of the Facility

No unavoidable adverse impacts are expected to result from normal operation of the South Plainfield facility. The area in which the facility is to be located is industrial, therefore it is constructed and managed for industrial and commercial use. The addition of the Safety-Kleen facility will cause no additional adverse impacts upon the area in which the facility is located.

#### 5.2 Foreseeable Abnormal Occurrences

The South Plainfield facility will maintain a contingency plan that describes the actions to be taken in a fire, spill or other emergency. This contingency plan adheres to the requirements of 40 CFR, 264 Subpart D, NJAC 7:26-12.2(e) 7 and 8, and 29 CFR 1910.120. The contingency plan is to be carried out immediately whenever there is a release of hazardous waste which could threaten human health or the environment. The decision to implement the contingency plan will be made by the facility's emergency coordinator.

#### 5.2.1 Spill Response

Procedures to be followed for a spill of hazardous waste are covered in the facility's Contingency Plan. The following section summarizes basic spill or release response actions that may be used to respond to a spill or release at the South Plainfield facility.

- If process equipment is involved, it will be shut off if such action can be taken without putting personnel at risk.
- The facility's emergency coordinator or alternate emergency coordinator will be notified.
- The alarm system will be activated to notify facility personnel of the emergency and evacuate the area, affected building or, if necessary, the entire facility.
- The spill will be reported to local emergency responders (fire department, emergency medical services, etc.), as necessary, and to the Safety-Kleen Environmental, Health and Safety Department.
- Under the direction of the Safety-Kleen Environmental, Health and Safety Department, the National Response Center (800/424-8802) and NJDEP Bureau of Communication and Support Services (609/292-7172), will be notified, if necessary.

Small spills and leaks from a container will be contained by either overpacking with a larger container, or by emptying the leaking container into another container. When a tank system is leaking, the damaged section of the tank system will be isolated. In the case of a leak in the pipe system, the line will be cleared of wastes. In the case of a tank leak, the contents of the tank will be pumped into another tank. In any case, the leak will be repaired, if possible (e.g., repairing a valve, sealing a leak, etc.), or the leaking equipment will be replaced.

For spills occurring at the tank farm, or container storage areas, spilled waste material will normally be contained within the secondary containment system. If hazardous waste is released outside the containment areas or, if the waste overflows from a containment area, the spill will be contained by damming, diking or blocking the flow of material with absorbent socks or similar temporary barriers. Leaking tanks, pipes or other equipment will be plugged, patched, off-loaded, or overpacked (the latter applies to small containers and drums), as appropriate, to stop the release of liquid.

Large amounts of contained chemicals will be pumped to drums or tanks. Small quantities of chemicals spilled from a container or tank will be cleaned up using absorbent material and placed in drums for appropriate off-site disposal. Spilled or leaked material within secondary containment areas will be removed within 24 hours or in as timely a manner as possible.

Any contaminated soil or water generated by the incident will be stored appropriately for off-site management at an authorized facility. Response equipment and personnel protective gear will be decontaminated or replaced.

Spills will be recorded by the Emergency Coordinator or designee. A copy will then be sent to the Corporate Environmental, Health & Safety Department, who will review the report with facility management to determine what action should be taken to prevent similar occurrences in the future.

#### 5.2.2 Fires or Explosions

Procedures to respond to a fire or explosion are also included in the facility's contingency plan. The following paragraphs summarize response procedures for small and large fires and explosions.

If the fire is small, the person who discovers the fire will act quickly with an appropriately rated fire extinguisher to limit the spread of fire, in accordance with fire suppression training. A second person will activate the fire alarm to notify facility personnel of the emergency and report the fire to the fire department. If processing equipment/systems are involved, they will be shut down if such action can be done without putting personnel at risk.

If the fire is large, the person who discovers the fire will activate the facility fire alarm system to notify facility personnel of the emergency, and evacuate the facility. The facility emergency coordinator or his designee will report the fire to the fire department, local emergency responders and regulatory agencies, as needed. Any releases of hazardous waste will be managed as described in the facility's contingency plan, as summarized in Section 5.2.1.

#### 5.2.3 Natural Disasters/Civil Unrest

In a tomado, earthquake, 100-year flood, heavy snowfall, or rain storm exceeding the 24-hour, 100-year amount (i.e., 6.5 inches) the service center will be evacuated or activities curtailed as necessary until the event is over. After a natural disaster the

Revision: 0 August 1993

facility will be inspected for damage and Safety-Kleen will notify the New Jersey Department of Environmental Protection of any permit non-compliance.

In the event of any civil unrest around the facility the local police department will be notified.

#### SECTION 6

#### UNUSUAL CONDITIONS

Table 6-1 identifies the various types of accidents/spills that could potentially occur at the South Plainfield facility. Flow rate and total quantity are also estimated where applicable. The table presents the worst-case scenario for each type of spill.

It is Safety-Kleen's intent to utilize best management practices to minimize spills and releases throughout the life of the facility. The hazardous waste management units have been designed for safe operation and will minimize releases of hazardous waste, leachate or impacted rainfall to the air, groundwater, surface water, or surrounding land. Specific activities practiced at the South Plainfield facility to prevent releases of hazardous waste or accidents will include the following:

- Prohibiting smoking in all areas except designated areas;
- Isolating waste from all ignition or reaction sources;
- Maintaining good housekeeping and cleaning up debris at the facility;
- Immediately ceasing operations and turning off all feed lines, auxiliary fuel lines, and power supply to an area affected by an emergency situation;
- Maintaining emergency and spill response equipment at the facility at all times. This equipment will include fire extinguishers, sorbents, overpack drums, wet/dry vacuum shovels, personal protective equipment, first aid kits and eye wash/shower stations.
- Regularly inspecting the areas at the facility in which hazardous waste is managed;
- Prompt repair or replacement of problems documented during inspections.

j.K.

### TABLE 6-1. POTENTIAL ACCIDENTS/SPILLS

Source of Spill	Location	Potential Cause of Spill	Containment	Rate of Spill (gal/min)	Estimated Quantity (gallon)
Containers	Container Storage Area No. 1 and No. 2	Tipping or rupture of container	Inside secondary containment area	5-55	5-55
Wet dumpsters	Return and Fill Station	Overfilling or rupture of wet dumpster	Within secondary containment	375	375
15,000-Gallon tanks	Tank Farm	Leaking, ruptured or overfilled tank	Contained by concrete dike	Variable	15,000
15,000-Gallon tanks	Return and Fill Station, Tank Access Lines	Leaking or ruptured transfer lines and/or pumps	Contained by concrete	Variable	6,000

EFO-002 (DEQ-062) 9/94 NEW JI SY DEPARTMENT OF ENVIRONMENTAL PRODIVISION OF ENFORCEMENT FIELD OPERATIONS
AIR & ENVIRONMENTAL QUALITY ENFORCEMENT

INSPECTOR		
ASSIGNED		
171		

# FIELD INVESTIGATION ASSIGNMENT REPORT

DATE	DATE
ASSIGNED	DUE
DATE	COUNTY

COMPANY NAME SAFETY - KLEEN  LOCATION S . PLAINFIELD  CDS CLASS: A1 A2 B NSPS NESHAPS PSD  AIR GRANT (105): Yes No PLLT: PT S2 CO  COMPLAINT NAME  COMPLAINT ADDRESS  DATE RECEIVED TIME RECEIVED COMP. LOG	Complaint APEDS Order Followup CMS PRIORITY CODE 3  N2 VO Toxic Other PHONE #
ASSIGNMENT	
TITLE FACILITY MANAGER  TIME AT PLANT TIME! 11:30 TO 12:30  TOTAL ASSIGNMENT TIME/OT 5HRS  STACKS INSPECTED TEMPS  # OF SOURCES INSPECTED STK TEST REQ  SAMPLETYPE VIOLATIVE SAMPLE#  EFO-007 (DEQ-012) Completed in the sample of and a print of the sample o	Compliance Archieved Yes No Give details below  Billable Stacks: (give details below)  A 3/1/0/ assisted
JEMS complete vapor presoure as	Agrice & since 70 W. J. model volume.  INSTRICTOR SIGNATURE
B/MS	SUPERVISOR'S REVIEW
EE ATTACHED FOR ADDITIONAL INFORMATION: YES NO	INITIALS: DATE: 3-701

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